The OIL WEEKLY

ENGINEERING • NEWS • STATISTICS

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The OIL WEEKLY and The COMPOSITE CATALOG for the drilling-producing-pipeline industry

PETROLEUM REFINER and The REFINERY CATALOG for the refining-natural gasoline industry

LOOKING AHEAD
. . . with the Editor

PROPER ratings for all types of belts intended for oilfield service by the belt manufacturers are being advanced by the oil industry.

A comparatively new method of rating, known as the peak-torque rating, has been used continuously over a period of years in the design of both chain- and gear-reduction drives. Many advantages have been gained by classifying belt drives in the same manner as other drives for pumping of wells, where shock loads are important.

A discussion of this new method of rating belts for oilfield pumping drives is presented in an article by D. O. Barrett, chief production engineer for Gulf Oil Corporation, Tulsa, to appear in next week's issue of THE OIL WEEKLY. The writer points out that belt manufacturers have at their disposal the necessary information so that such a rating can be readily supplied.

THE OIL MAN'S CALENDAR

OCT. 1- 2	American Association of Drilling Contractors, Skirvin Hotel, Oklahoma, City.
9	FPC Gas Hearings, Room 609, County Court House, Oklahoma City.
12	California Natural Gasoline Association, 20th Annual Fall Meeting, Los Angeles, Biltmore Hotel.
15-17	Independent Petroleum Association of America, Membership Meeting, Mayo Hotel, Tulsa.
24-25	American Gas Association Annual Meeting, New York, Engineering Societies Building.
30	FPC Gas Hearings, Room 245, Post Office Building, New Orleans.
NOV. 12-15	American Petroleum Institute, Silver Jubilee Meeting, Stevens Hotel, Chicago.
26	Independent Natural Gas Association, Annual Meeting, Dallas.
27	FPC Gas Hearings, Dallas.

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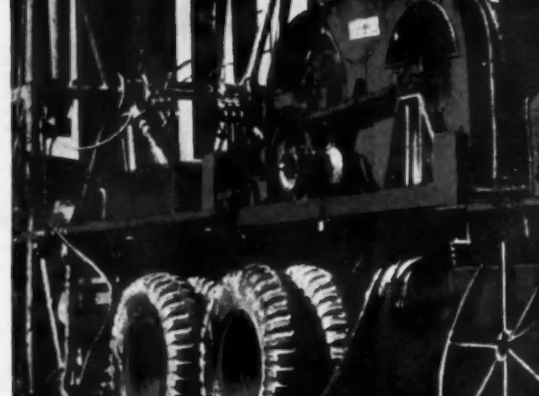
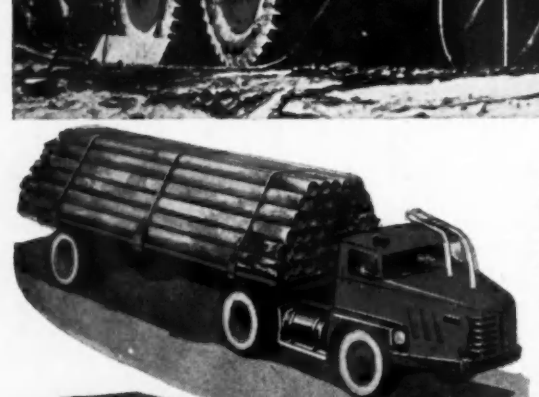
The WORST Running Conditions Bring Out The BEST In...

WALTER TRACTOR TRUCKS





Mud—sand—dirt—ruts—slippery surfaces—steep grades make the best proving ground for Walter Tractor Trucks! For it is here that the tremendous power plus traction provided by the Walter Four-Point Positive Drive pays top dividends—in hauling heavy loads unfailingly where other trucks slip, stall or bog down!

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The Changing Panorama

Leave Submerged Titles With the State

TEXAS officials including the Governor and Land Commissioner are to be commended for their action in urging the Texas delegation in Congress to support H.J.R. 225, approved last week by the House, which would prohibit the federal government from asserting claim to submerged lands, river beds and navigable lakes belonging to the states.

It has only been since submerged lands in certain areas have proved valuable because of minerals, oil for example, that ownership of such lands has become an issue, notably during the past few years. Secretary Ickes, in fact, has pressed the matter by filing claim on the part of the Government to California coastal lands, spurred certainly by the fact that these lands have oil under them in many instances.

It seems only a matter of common sense that such lands belong to the states to which they are adjacent. It is claimed by the Texas officials that Texas reserved its public domain when it entered the Union.

Ickes' suit to force claim to the California submerged lands has resulted in legislation designed to forever block such assertion. It is to be hoped that the legislation is passed, since any claim the federal government might make on such lands would always be doubtful and would result in confusion between it and the states, just as has the claim on California lands.

Free Competition of Fuels Is Best Policy

THERE is a lot of good sense in the statement of B. A. Hardey, vice president and chairman of the IPAA's oil and gas committee, before the FPC hearing in Kansas City, recently, when he noted that "competition between fuels should be left to the determination of free competition stripped of the influence of special groups and advantages resulting from attempted administrative control."

The history of this country has proved time and time again that the cheapest and best product will win out in the long run, and under our concept of private enterprise that is the way things should be. Few natural resources are cheap until they are made so by man's ingenuity. Also few are available to mankind until they have been made so by enterprise. As Hardey pointed out, hoarding is not conservation, even with a natural resource, and even if it were, when hoarding is considered by government, the property rights of the citizen are usually ignored.

Conservation is admittedly a function of government, but as was pointed out recently by Colonel Ernest O. Thompson, of the Texas Railroad Commission, the only way conservation of a natural resource can be administered is by rule of reason. Reason has to include the rights of all people concerned, property owners included. Too much administrative control of property by government doesn't talley with the American concept of government. If this fact is emphasized through the FPC hearings, they will be worthwhile.

Need for Further Gas Research Emphasized

THE economic importance of natural gas has grown rapidly in recent years. Today, gas reserves exceed the weight value of our crude oil reserves. The petroleum industry no longer can be thought of in terms of oil alone, but attention must be given to natural gas also.

With the interest of the industry and the public heretofore centered chiefly on oil, there has been an almost complete lack of research on natural gas problems. It, therefore, is urgent that comprehensive research programs on natural gas be inaugurated. There is a need for much fundamental information, not only on the utilization of gas, but also on production and transportation problems.

What research that has been done has been largely during the war and on utilization and processing phases. The matters of gas production and transportation have been neglected, and there still is much to do on utilization and processing. Undoubtedly, more efficient producing and transporting methods can be developed, if greater attention is devoted to these phases. These would help the oil industry as well as the gas industry, because much gas is produced by oil operators and because gas is to be more important in oil producing operations due to greater use of pressure maintenance and recycling.

Several companies have inaugurated natural gas research studies or have indicated their intention of doing so. Others should follow suit. However, there is such a vast amount of fundamental research to be done that studies by groups like the United States Bureau of Mines are advisable. The bureau did some of the early oil research work, a part of which is still recognized as the basis of certain fundamental principles. The bureau can do the same thing for gas. It can serve as a cooperative research study group for the benefit of all interested parties, large and small, saving duplication of effort without interfering with the work of individual concerns on specific phases.

The bureau's research activities will now divert from war efforts to normal duties, providing an ideal time for commencement of new studies. Natural gas should be the primary consideration of the Petroleum Division of the bureau, at least for several years.

Fallacy of Doctrine Of Absorbing Costs

OPA Administrator Chester Bowles may be perfectly honest in his belief in the doctrine of absorbing costs, but it is difficult to see how anybody can rationalize such a belief with common sense. OPA now says that manufacturers cannot charge more for their products even though manufacturing costs are admittedly much higher than they were in 1942.

Dangerous inflation should be avoided and no thinking person will argue this point. However, there is wide difference of opinion in this country as to just how serious inflation has become, and is likely to become. Why shouldn't people pay more for products now than in 1942? The government itself says there is more money in the average man's pocket now than in a long time before. If this be true, what is the point to keeping prices below the cost of producing goods? It doesn't take a degree in economics to help one realize how silly such a theory is. The proposition is not only silly, but exceedingly dangerous if applied widely.

The oil business has learned something about absorbing costs in connection with the low price of crude which has been maintained by OPA. It is safe to say that the doctrine doesn't have many supporters among crude producers.

There is something to be said against too high profits in any line of business, but when it comes to no profits and absorbing costs besides, and expecting business to go on—that situation is impossible from any point of view. For any agency of our government to advocate it should not be tolerated. The sooner that agency is put out, the better.

Direct Fuel Injection

A WARTIME development likely to affect peacetime air transportation is the direct fuel injection system used on all latest model B-29's, the result of more than 13 years of research. Full realization of the potential power efficiency of the Super-Forts' 18-cylinder engines required development of specialized fuel equipment to insure correct fuel and air proportions and precise accuracy of fuel distribution. In the new systems, gasoline is pumped under pressure directly into individual engine cylinders, at 18 times the speed of the fastest firing machine gun.

The new fuel systems facilitate engine starting with less warm-up time; achieve a faster rate of climb from ground level to high altitudes; improve acceleration, cooling, and engine operation in normal and emergency power ranges; minimize backfiring, fire and icing hazards; and stabilize operations at lean fuel mixtures and reduce fuel consumption, thus increasing the range and "pay load" of the Super-Forts.

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Dead-Line Stabilizers

THE NEW Patterson-Ballagh Dead Line Stabilizer is a wear, tear and friction saver. Its users everywhere are rapidly adopting it as standard equipment.

The only wearing part of the stabilizer is the oil-proof PBX synthetic rubber lining, which is simply and easily replaced. It is made in 8" sections. "Hammer" nuts are used to lock the frame; thus refill installations can be made without tools other than a hammer. The lining is grooved, as shown in cutaway photo, to hold a lubricant. The stabilizer does not bend the line, allows freedom of movement, with absolutely no wear to the line. In operation this useful device "Stabilizes" dead line thereby preventing wear, tear and friction in contact with the finger board. No loss of time occurs in maintenance and line failure at this point, as well as the whip so destructive to weight indicators, is prevented. The Dead Line Stabilizer is a most economical way to save expensive equipment.

"Best Bet Yet"

PATTERSON-BALLAGH

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Horizontal Drilling

Horizontal Tributary holes drilled from vertical bore provide means of increasing the movement of oil from drainage area

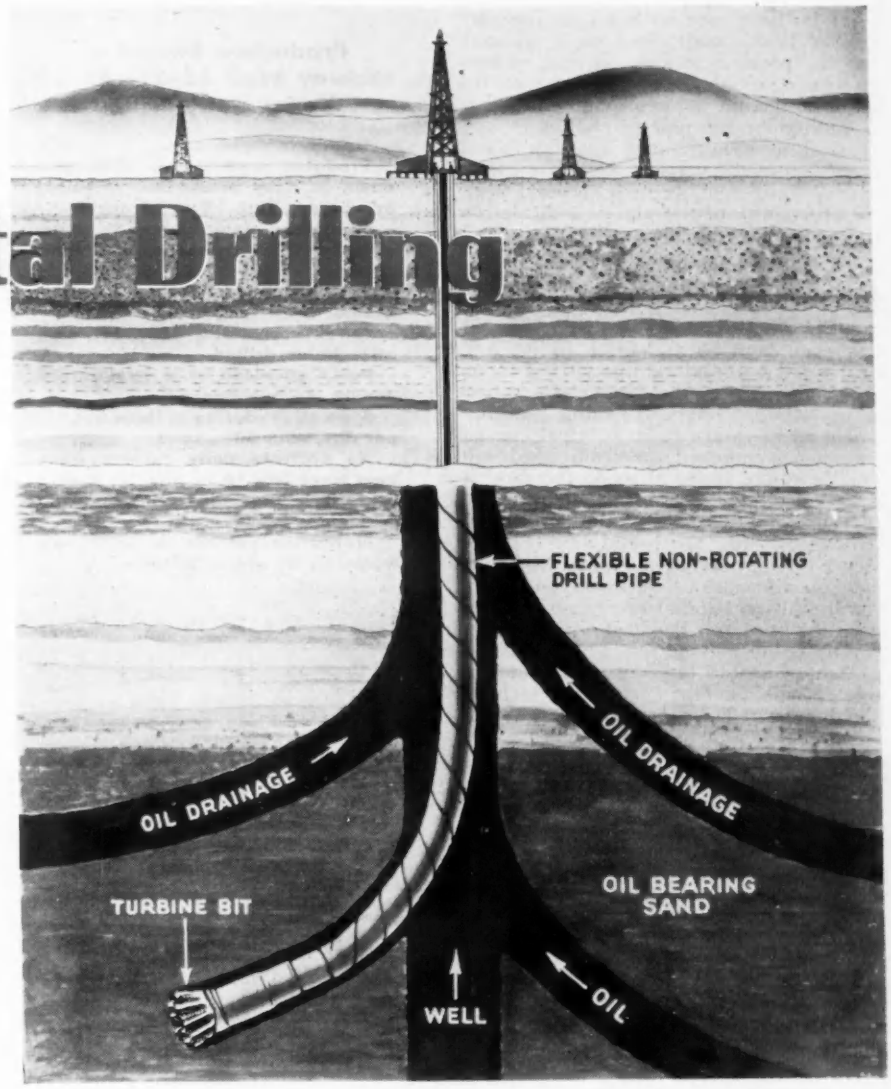


FIGURE 1

THE actual area drained by a well drilled through or into a productive sand is problematical. This applies whether the hole is vertical or penetrates the sand at an angle, as when the well is drilled by direction control to reach a predetermined point some distance from the surface location. The flow of oil to the bore is governed by many natural factors such as permeability and porosity of the sand, the cementation of the grains, the gas content of the fluid and its stratified location, and the driving force moving the oil. Then there are adverse factors tending to retard the flow of fluid into the bore, such as infiltration of water from the drilling mud, plastered faces due to use of improper mud, and sloughed sand.

As a well produces, the flow of oil to the bore decreases and movement of fluid from the outer circumference of the assumed drainage area becomes less. Actually, the true drainage area probably shrinks as the well produces and much more oil at a distance from the well is left in the sand than in the area immediately surrounding the bore. Moreover, additional retarding factors appear, both in the sand inself and at the face of the hole. Among these are fine sand clogging the pores of the sand, sloughing sand in the hole or around the liner, and deposition of colloidal and residual matter from the oil itself.

The drilling of horizontal tributary holes from the vertical bore provides a means of increasing the movement of oil from the entire drainage area of a well. Each of these horizontal drain holes establishes an individual drainage area within the assumed drainage of the well and provides a passage for the flow of oil from its drainage area to the vertical hole. Deviating horizontal drilling is therefore applicable to new wells, to old wells for stimulation of production, and frequently for production from wells that have fallen below the economic limit; and to wells being produced by secondary recovery methods.

Horizontal Drilling

The method of deviating horizontal drilling was devised and the equipment for its use was designed by John A. Zublin of Los Angeles. The equipment consists essentially of a turbine bit and flexible drill pipe. The bit is rotated by the drilling fluid which is circulated by the mud pumps, the mud fluid being maintained at a suitable viscosity for operation of the bit. The drill string is, of course, not rotated during the normal course of drilling the horizontal hole.

One or more horizontal holes may be drilled from the vertical bore, the number being determined by the well conditions and the desire of the operator. As an example, several holes may be drilled radially, as shown in Figure 1. These holes take off from the well in a vertical arc and are located at desired vertical distances above one another. The holes can be started at any point in open hole or through windows cut in liner or casing. The direction of the horizontal holes may be predetermined and the holes started off in any desired direction by orienting the drill string in the well.

The lower part of the drill string used for drilling a horizontal hole consists of the number of joints of flexible drill pipe necessary to carry the hole for the distance from the vertical bore to the point in the sand to which the horizontal hole is to extend. The bottom flexible joint to which the bit is attached is made from a curved section of drill pipe. This causes the hole to start off in an arc as the bit begins cutting. The other flexible joints are straight and follow the curved joint along the arc which it establishes. The upper portion of the drill string is made up of conventional drill pipe.

The Flexible Drill Pipe

The flexible joints are made from 4½-inch external flush joint drill pipe as shown in Figure 2. A spiral slot is cut through the wall of each joint of pipe through its entire length except for a distance of 15 inches at each end. The

joint is then lined with a high-pressure rubber hose, made fluid tight at each end to prevent leakage of the power-circulating fluid. The spiral slot of the straight flexible pipe provides adequate flexibility for the pipe to change from a vertical to a horizontal direction as it passes from the vertical well bore into a curved and then into a horizontal hole. The flexibility of the pipe is indicated in the accompanying illustrations.

The curved flexible joint used at the end of the string and to which the turbine bit is attached is made by cutting a spiral slot in a joint of drill pipe that has been bent to a definite radius and heat-treated to maintain its curved form. Otherwise it is of the same construction as the straight joints of flexible pipe but will tend to return to its original curved form when unflexed. The radii used will usually range from 20 to 35 feet and it is by selecting the proper radius for the curved joint that any slight upward direction of the horizontal hole can be secured. A 25-foot radius joint will allow the hole to continue in approximately a horizontal direction after the vertical arc from the bore hole has been drilled, since gravity causes the curved joint to straighten as the bit continues to make hole. Should a slightly upward inclination be desired for production reasons, a curved joint of smaller radius can be used.

Before being run into the well, a mandrel is inserted as a core through the curved section of pipe. See Figure 2. The curve joint is straightened and held in a straight position by means of a clamping device and the mandrel then inserted. The mandrel is equipped with a spear at the top for the purpose of withdrawing it from the curved flexible pipe. After the flexible pipe has reached its point of operation, the mandrel is withdrawn by means of a sand line. The curved pipe is allowed to assume its curved form within the limits of the hold in which it is confined.

The Turbine Bit

The bit used for drilling horizontal holes is a rotary turbine bit which attains a high rotational speed by means of power derived from the energy of the fluid pumped down the drill string to the bit. The construction is shown in the cross-sectional view given in Figure 3. The cutting action of the bit depends in part upon the tendency of the cutter teeth to lift and drop the bit. A highly efficient bearing mechanism is therefore provided to resist the axial loads imposed by the tendency of the bit to rise and fall and the resistance to such movement by the turbine and the drilling string above. Since turbine parts will eventually be cut away by abrasive action of the power fluid, the construction of the bit provides ready disassembling and reassembling for replacement of parts of the turbine.

The entire bit, including housing, turbine and cutting member, is made as short as possible to provide for drilling the curved hole with which the horizontal hole takes off from the vertical. The overall length is only 20 inches. The fluid is discharged as close to the cutting teeth as possible in order to remove cuttings from the bottom and to keep the bit and well bore clean.

The turbine bit assembly consists of three main parts: a casing or housing made with a pin for connection to the drill string and carries the nozzles of the turbine; a shank member, rotatively mounted in the housing, carrying the turbine runner; and the cutter element which is mounted to rotate on the shank about an axis that is inclined with respect to the axis of rotation of the shank.

Horizontal Drilling Procedure

The turbine bit is attached to the bottom of the curved joint of flexible pipe which is flexed to a straight position and kept straight by the mandrel. Above this are the required number of straight flexible joints to reach from the vertical bore to the point in the sand where the horizontal hole is to end. These make up the lower portion of the drill string which consists otherwise of conventional drill pipe. When the bit reaches the depth at which the horizontal hole is to take off from the vertical, the mandrel is removed and the curved flexible joint allowed to return to its curved form to the extent the hole will permit. The drill string is then hooked up to the pumps an any convenient manner. Portable surface equipment usually will suffice, but the pumps must be able to deliver the necessary volume of fluid at the required pressure and velocity.

When the pumps are started, the bit, being forced by the curvature of the flexible pipe against the side of the vertical hole, will begin to dig into the wall of the bore and start new hole at the point where it is positioned. It has been found that when the string is raised and lowered after removing the mandrel, but before the pumps are started, that the bit, despite the pressure of the curved flexible pipe, will slide up and down within the vertical hole, which makes it possible to change the location of the bit even after the mandrel is pulled. However, as soon as the turbine bit starts to rotate under pump pressure, the bit will dig immediately into the side wall of the vertical hole, at that point where the bit exerts pressure against the wall. Only a very slight weight is carried on the bit during drilling.

Eight Holes from One Well

Drilling procedure is best illustrated by actual performance in testing a well a few weeks ago. In well No. 16-27, 31-22 in the California midway district, eight holes were drilled horizontally for the purpose of regaining economic production from a well that had not produced for 17 years. This well was originally drilled in 1918 and last produced one barrel per day of 14-gravity oil cutting 2.6 percent in March, 1928, having been shut down since that date. In this well 12½-inch casing was cemented and the horizontal holes were drilled from open hole below the casing.

The eight holes drilled ranged from ten to 80 feet and were made with six 6-inch turbine bits connected with 4½-inch flush joint flexible drill pipe. Due to mechanical difficulties the first bit was pulled before it made any hole. Two power pumps were employed during the drilling operation, one 7¼ x 10 inches and the other 7¼ x 14 inches. Turbine bit No. 1 was run into the hole at 929 feet but was immediately removed because pump trouble was encountered. The bit was changed to Bit No. 2 which was oriented into the hole at 929 feet with 18 feet of 20-foot radius curved flexible drill pipe and 92 feet of straight flexible drill pipe. The conventional drill pipe above was 4-inch full hole. After recovering the mandrel and establishing circulation, drilling was started. After drilling ten feet of hole, the pump was shut down and the bit lowered approximately one foot. It there took 1¼ points of weight and this indicated the turbine bit was digging new hole. Upon drilling 41 feet the pumps were stopped again and the drill pipe raised ten feet, moving perfectly free. The bit was then lowered to bottom and took one point of weight. At 66 feet the pump was running at 58

Production Record of Midway Well 16-27, 31/22 Horizontally Drilled

Drilled in 1918.

Produced until 1928, then shut down as daily production was only one barrel, with 12 to 14 gravity.

Seventeen years later, in June, 1945, well was reopened and side-tracked.

Seven horizontal drain holes were drilled. Total length, 421 feet.

Fluid level stood 300 feet high after holes drilled.

Pump operated at 4 strokes per minute, 26-inch stroke.

Starting producing at three barrels per day, with 50% sand.

No accurate daily records were kept from July 16 to July 21, during changes in pumping cycles and experimental work.

Production records maintained from July 21 are as follows:

DATE	Barrels	Gravity	Sand, Percent
July 21	12	12.9	35
July 22	13	12.9	35
July 23	14	12.9	35
July 24	18	12.9	35
July 25	22	12.9	35
July 26	21	12.9	35
July 27	14	Thin	20
July 28	13	Thin	15
July 29	12	Thin	15
July 30	20	Thin	15
July 31*	13	Thin	15
August 1	20	12.9	15
August 2	20	12.9	15
August 3	20	12.9	15
August 4	20	12.9	15
August 5	19	12.9	15
August 6	18	12.9	15
August 7	18	12.9	15
August 10	22	12.9	10
August 11	22	12.9	10
August 12	22	12.9	10
August 13	22	13	10
August 14	22	13	10
August 15	20	13	10
August 16	25	13	10
August 17	25	13	10
August 18	23	13	8
August 19	26	13	8
August 20	26	13	8
August 21	26	13	8
August 22	21	13	8
August 23	24	13	8

*To this date, well produced some water. No water thereafter.

By pumping less sand, the pump is operated faster—thereby increasing production.

The above production figures are net barrels, exclusive of water and after sand was separated from the oil.

The maximum daily production is apparently not yet reached. It will be interesting to watch the production figures for the following months.

strokes per minute with a pressure of 450 pounds per square inch. At 75 feet the drilling was stopped and the bit pulled out.

Bit 3 was oriented into the hole at 918 feet with the same flexible drill pipe at Bit 2. The mud weighed 67 pounds per cubic foot and had a viscosity of 25 seconds, 500/500. After starting drilling, a check was made to make sure new hole had been started. The line pressure from the pump was 450 pounds per square inch. During drilling at 40 feet the weight indicator showed 0.5 point weight. After reaching 75 feet drilling was stopped.

Two 31-foot singles were pulled with the pumps operating and then, after shutting down the pumps, the bit was raised to 910 feet from 918 feet, where the previous hole had started, being oriented on its way up to drill out at N. 75° W. as shown in the table. Drilling was started there and after going 5 feet a check showed new hole was being made. The mud was 67.5 pounds per cubic foot with a viscosity of 25 seconds, 500/500, the line pressure being 410 pounds per square inch. After drilling 10 feet it was impossible to drill further. The bit was pulled out and a 10½ ⅝-inch conventional rock bit on conventional drill pipe was run to clean out the vertical hole to the bottom. Sand bridges were found at 934 to 941 feet and 974 to 1028 feet.

Bit 4 was not oriented into the well and the drill string was changed to an 18-foot, 20-foot, radius curved flexible joint, 95 feet of straight flexible drill pipe and the rest of the string 4½-inch full hole drill pipe. The bit was positioned at 883 feet. The first 5 feet of hole were drilled with a pump pressure of 425 pounds per square inch when the pump was shut down, the string lowered one foot and the bit found taking one point of weight, showing new hole was being made. On drilling again, the pressure increased to 675 pounds per square inch and later reduced to 600 pounds per square inch. When 30 feet had been drilled there was a very strong showing of gas on the ditch, sufficient to cause the fluid to froth over the mud ditch. When the hole reached 48 feet the bit was slowly pulled out.

After removing a 31-foot single, the bit was pulled up to 876 feet, being turned 90 degrees clockwise between 883 and 876 feet. The pumps were then started with a pressure of 550 pounds per square inch and, after checking to make sure bit was making new hole, drilling continued. After reaching 25 feet, a 31-foot single was added, the mud at this time being 64 pounds per cubic foot with a viscosity of 29 seconds, 500/500. On starting up again, the pump would not operate properly, particularly due to gas-cut fluid, and no hole could be made of the poor pump action and gas-cut fluid. After pulling out, a 10⅝-inch conventional rock bit was run in conventional drill pipe into the vertical hole and found sand at 1023 feet. The vertical hole was then cleaned out to 1028 feet, new mud mixed and the suction pit, ditch and mud mixer cleaned.

Bit 5 was run to 881 feet on a 30-foot radius flexible curved joint 21 feet in length. Above this were 95 feet of straight flexible pipe and 765 feet of 4½-inch full hole drill pipe. After starting new hole, the gas-cut fluid in the hole was pumped into the sump. Drilling was then continued with a pressure of 450 pounds per square inch and 0.5 point weight. At 25 feet the line pressure was 550 to 600 pounds per square inch and the mud weighed 63 pounds per cubic foot. At 30 feet water was added to the fluid and at 40 feet the viscosity was 35 seconds 500/500. At 55 feet the pressure was 500 pounds per square inch and there was a strong showing of oil on the ditch. At 65 feet the line pressure was 300 pounds per square inch. At 80 feet, where drilling was stopped, the pressure was 225 pounds per square inch. The mud fluid was too gas-cut to handle and weighed 59 pounds per cubic foot, viscosity 30 seconds, 500/500. The drill pipe was pulled with the pumps operating and stuck at 70 feet in new hole. It was circulated free.

Figure 2. Elements required to horizontally drill oil well consist of straight mandrel to insert in curved flexible drill pipe which directs the hole away from the vertical hole and the turbine bit connected at end of curved flexible pipe actuated by high pressure drilling mud.

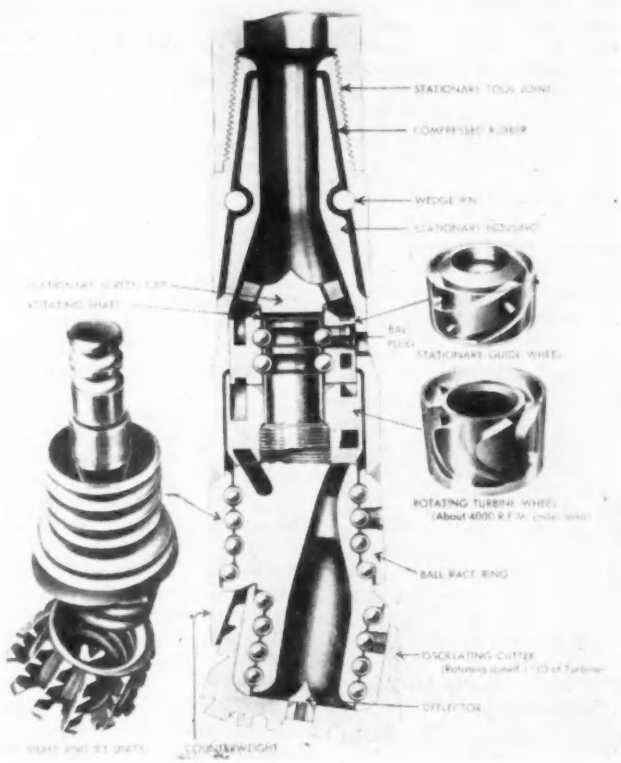


Figure 3. Details of bit used in horizontal drilling.

Mud Added

Bit 6 was run to 920 feet with the same flexible drill pipe as used with Bit 5. Additional mud was mixed, consisting of 50 barrels water, 10 sacks Aquagel and 25 pounds tetra sodium pyrophosphate. This chemical was only used once, the mud afterwards being cut with water. After removing the mandrel from the curved joint, but before starting the pumps, a test was made. The drill string was lowered slowly and smoothly for 10 feet and the indicator showed that the bit took no weight. The bit therefore could be moved downward slowly without catching on the side of the hole. With the bit positioned at 920 feet, the pumps were started and 2 feet drilled with a pressure of 500 pounds per square inch. The pumps were shut down and the string lowered one foot where the bit took 1½ points of weight, showing the bit was on bottom of new hole. The bit was raised back one foot and drilling continued. Pressure increased to 600 pounds per square inch. At 45 feet the mud foamed over the ditch and con-

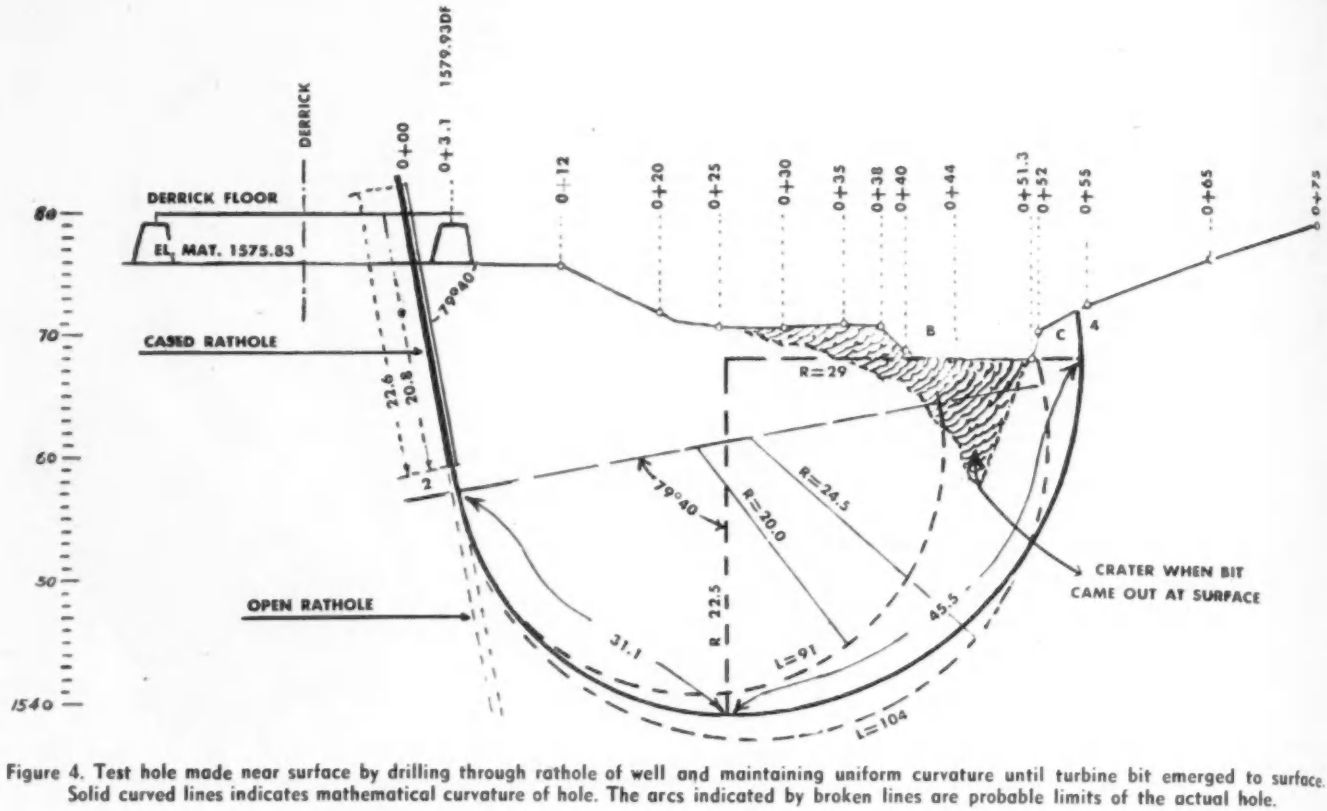


Figure 4. Test hole made near surface by drilling through rathole of well and maintaining uniform curvature until turbine bit emerged to surface. Solid curved lines indicates mathematical curvature of hole. The arcs indicated by broken lines are probable limits of the actual hole.

ductor pipe, the 7¼ x 14-inch pump then operating at 52 strokes per minute and the weight on the bit being 0.5 point. At 57 feet 148 barrels of new mud was added, a portion of oil and gassy mud being dumped. At 60 feet the line pressure was from 550 to 600 pounds per square inch. At 64 feet there were strong oil and gas showings on the ditch with the pump operating at 62 strokes per minute. At 70 feet the pressure was 475 to 550 pounds per square inch. Drilling was stopped at 75 feet.

One single was pulled with the pump operating and then a second single was pulled with the pump shut down. The bit was pulled to 919 feet where the drill pipe was turned 180 degrees clockwise and lowered three feet. The pump was started and, with a line pressure of 450 pounds per square inch, the drill pipe was lowered immediately 5 feet. The bit did not take any weight so it was pulled back to 922 feet and let stand for two minutes with the pump operating. On feeling for bottom the indicator showed that the bit took 1½ points weight. After drilling 3 feet the pump was shut down. On then lowering the drill pipe one foot the bit took 1½ points of weight, showing it was making new hole. After drilling 15 feet the pressure fell from 450 to 400 pounds per square inch, the mud weighing 61 pounds per cubic foot. At 20 feet there was a strong showing of oil and gas on the ditch. At 24 feet the pressure was 350 pounds per square inch and the pump was operating at 75 strokes per minute. The pressure continued to decrease and after drilling beyond 30 feet the pressure was 275 pounds per square inch, the mud 60.5 pounds per cubic foot and the viscosity of the fluid 30 seconds. The pump at this time was operating at 72 strokes per minute.

Hole was continued to 35 feet, when drilling was stopped and the string started out of the hole with pump running. The bit was gummed up.

During the drilling of the eight holes described above, the speed of drilling varied to some extent. The overall time for the operation, with the running of the second bit, is shown in the table. Actual drilling time while making hole averaged considerably more than one foot per minute. In drilling with Bit 4, for example, the 28 feet from 20 feet to 48 feet were drilled in 11 minutes and during part of this time gas showings strong enough to cause the mud fluid to froth were encountered.

Control of Course of Drilled Hole

A test to demonstrate the accuracy with which the vertical direction of a hole drilled with the curved flexible drill pipe can be determined was made at another well in the midway district. This test is shown graphically in Figures 4 and 5. In this case only curved flexible drill pipe was used, the turbine bit being positioned at a point in the rat hole as indicated in the drawing before the mandrel was removed. The point at which the bit was expected to reach the surface at approximately 60 feet from the rat hole was located before operations started. Before the bit reached the surface the ground began to cave, due to the mud fluid jetting from the bit, but in spite of that, the predetermined point of exit was within ten feet of the place where the bit actually emerged.

Advantages of Horizontally Drilled Drain Holes

The method of producing oil through drain holes deviating from a vertical bore into an oil sand offers definite advantages, both for new and old wells in the primary recovery of oil and for wells being produced by some system of secondary recovery.

For primary recovery there are three main advantages:

1. Increase of production of oil for a given well through curved drain holes drilled in any number and at any depth radially into the oil sand surrounding the vertical well from which they deviate.

2. Protection from floating sand clogging the well by flowing the oil through drain holes at less speed and settling the sand before the oil reaches the vertical well. The drain holes can be gravel packed where it is necessary to increase the retention of floating sand within the pack.

3. Prevention of escape of gas by flowing oil first downwardly and then upwardly through drain holes curved upwardly at both ends, keeping by proper flow control the lowest part of the drain holes always full of oil, forming a liquid seal, shutting off an undesirable escape of gas, accumulating the gas in the upper part of the oil sand and producing oil under a downward or "gas-cap drive," which is one of the most effective methods of production.

For secondary recovery the present method of gas repressuring will greatly benefit by the presence of the drain holes because by-passing of gas is prevented by the drilling of the drain holes in the proper direction between intake and producing wells, the flow of pressure gas being controlled through drain holes and sand bodies as a matter of lease resistance.

The drilling of drain holes in old wells can be done at any depth. With few exceptions all pumping or flowing wells will benefit by holes drilled horizontally from the bore of the vertical well. The

drilling of the drain holes can be done in either of two ways:

1. The old liner can be pulled and, if casing extends over the stratum to be drained, a section of the casing can be drilled out to the desired depth. Several drain holes are drilled in different directions, being staggered vertically several feet apart or in proportion to the thickness of the sand. The drain holes may be left open or filled with gravel. New perforated liner is then set in the vertical bore of the well, covering the mouths of the drain holes. Tubing and pump are set in the well below or above the drain holes according to the capacity of the well.

2. The old liner can be pulled and either oriented or non-oriented windows cut into the casing at the desired points. When the turbine bit and flexible drill pipe are run into the well and the mandrel removed, the curved joint of flexible pipe will cause the bit to pass out through the window when the bit is rotated, the bit having been lowered to the proper depth. A turn of the drill string will allow the bit to find the window with evidence at the surface if the bit happens to be pressing against the casing at a point circumferentially away from the window. The drilling then proceeds as described. Excess space in windows can be closed with special shields if the well is a large, high-pressure producer.

Wells producing from loose sands become clogged around the well bore by floating sand and colloidal matter. Drain holes drilled beyond the clogged area give old wells new production by reaching out into sands having greater permeability. The reduced resistance of flow through the looser sands which are not sealed with colloidal matter, and which are reached by the drainage holes, greatly increases production, according to Zublin.

Drilling Drain Holes in New Wells

New wells will benefit when a number of drain holes are drilled before the well is brought in. Due to the largely increased area of contact between formation and drain holes, a new well can be produced at a greater capacity without exceeding its limit of efficient production. The maximum pressure differential between hole and formation is moved from the vertical well bore itself toward the ends of the drain holes where it effects a far greater volume of virgin oil sand. From this greater mass of sand the oil can be drained in large quantities and at such low velocities that, despite increased production, the retention of gas and sand within the formation becomes possible.

Technique Developed by Experience

The mechanical operations of drilling horizontal drain holes are simple and vary only slightly when different kinds of sands are to be drilled. The following points have been observed by the actual drilling of horizontal holes from a vertical bore:

1. The drain hole should be drilled for its full length in one round trip.

2. The drain holes, with present equipment, should be drilled approximately 80 feet long.

3. The curved hole taking off from the vertical bore should have a radius of 25 feet to reach most effectively the 80-foot length.

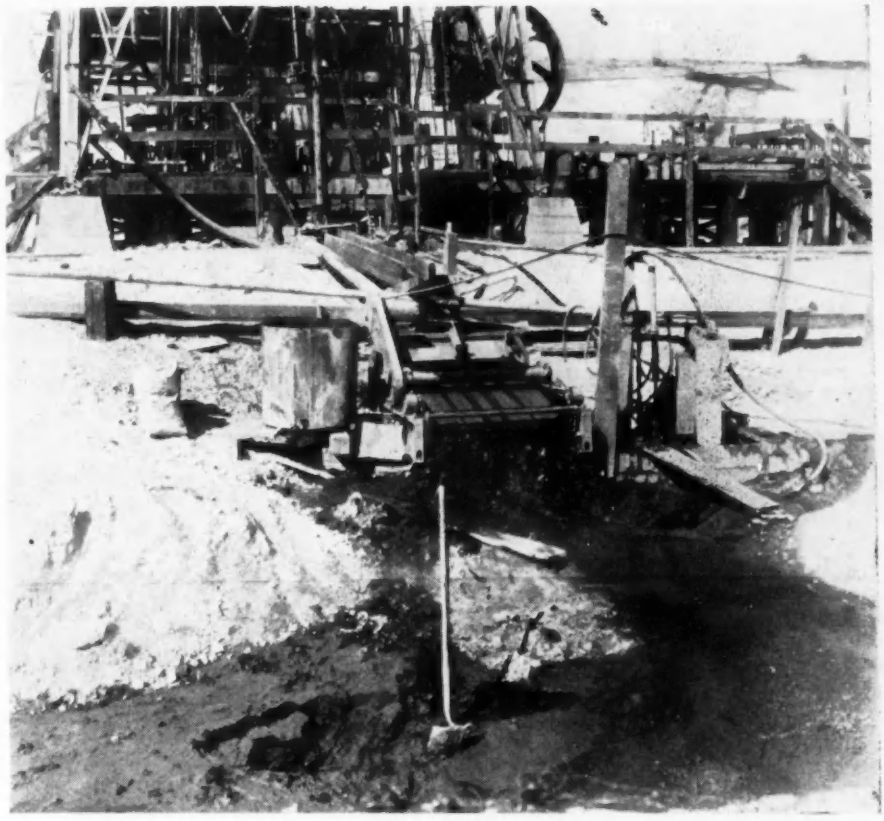


Figure 5. Blowout or crater marked at shovel indicates where turbine bit emerged from test hole after drilling through the rathole. Casing in rathole with end of flexible drill pipe and swivel is visible in the derrick.

4. Very light mud should be used and the turbine bit and flexible drill pipe should be withdrawn as soon as the horizontal hole has been completed.

5. The horizontal drain hole should be drilled with speed and should average approximately 1.5 feet per minute. The turbine inside the bit rotates at 4000 revolutions per minute and will wear whether the bit makes hole or not.

6. A powerful mud pump should be employed and should be capable of delivering 400 g.p.m. of light, non-abrasive fluid at a pressure of 700 p.s.i. at the pump.

7. An accurate weight indicator should be used. The weight registered on the turbine bit should range from ⅛ to 1½ tons maximum.

8. An efficient mud screen-shaker should be employed to prevent abrasive sand from re-entering the turbine bit.

9. At a convenient place between the pump and the rotary hose there should be inserted a heavy plate, perforated with several hundred 3/16-inch holes to prevent small rocks and pieces of rubber or other foreign substances from entering the flexible pipe and blocking the veins of the turbine bit.

The drilling of longer drain holes in harder oil sands may require more than one round trip. This, however, is no inconvenience because the turbine bit will always find its hole which, in such sands, has walls sufficiently firm to allow repeated lowerings and withdrawals of the turbine bit and the flexible drill pipe.

The ultimate length of horizontally drilled drain holes cannot be determined at this time. With the advance of horizontal drilling technique, however, it is believed that drain holes of several hundred feet can be drilled. Methods of orientating drain holes will also be facilitated as the practice becomes more extensively developed.

Different Drilling, Production Practice

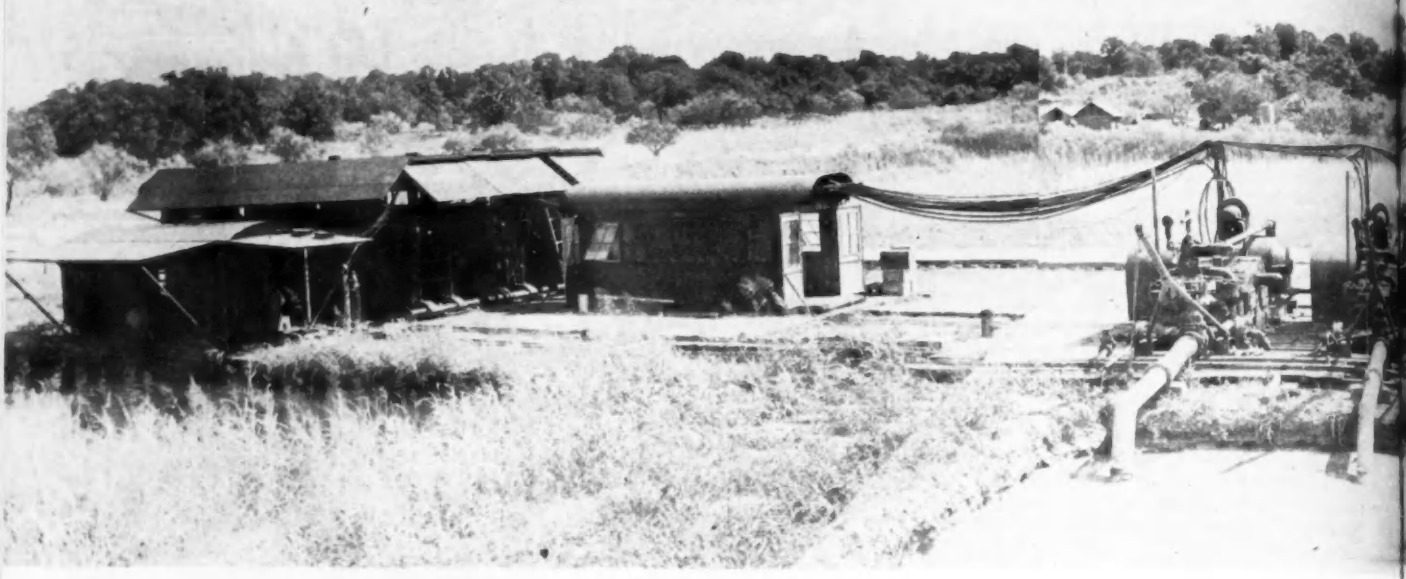
The protection of the finished hole, such as is given to a vertical bore, is not necessary because partial destruction of the round bore of a horizontal drain hole (particularly when there are several such holes) does not imply the full loss or even partial loss of production—something which would be inevitable under present methods of production—if the single vertical bore should cave.

Although flexible perforated liners can be set in curved drain holes, in loose oil sands their insertion is difficult; and for heavy oil their value is doubtful. In most cases it will be easier to drill a new horizontal drain hole than to clean out the flexible liner of an old drain hole.

Gravel packs in drain holes should be considered for larger wells where floating sand can reach the pump. Gravel of approximately one half inch in diameter should be given consideration in experimental work. This gravel can be removed easily if a re-drilling of drain holes becomes necessary.

Open drain holes with as little mud deposit as possible and without gravel are recommended for small pumpers of low-gravity oil. At least four drain holes should be drilled in a well, each deviating 90 degrees from the other, the holes staggered vertically about five feet apart. In places where the oil sand has sufficient thickness a larger number of horizontal drain holes can be drilled.

Diesel-Electric Rig Employs



A DRILLING rig powered by nearly 2000 horsepower and using remote control from the derrick floor has been developed and put into operation recently by Rowan Drilling Company of Houston.

This rig is drilling below 6500 feet on a wildcat for Quintana Petroleum Company near Gonzales, Texas. By manipulation of three switches on the derrick floor, the driller is able to direct the power output of three 650-horsepower diesel engines. Two of these engines are connected directly to a 400-kilowatt generator and the third is connected directly to a 300-kilowatt generator and also is connected to a 135-kilowatt generator by means of V-belts. This arrangement allows for maximum power output for a round trip, and also allows distribution of power during drilling operations. In this manner 300 kilowatts can be connected to the rotary table, 135 to the mud mixing pump, while the two 400-kilowatt generators can be used to operate each of the other two slush pumps.

In the general layout, the engines are 150 feet from well center with power lines leading through the control equipment to each of the driving motors. The control building, located directly in front of the engine house, contains the switches by which the driller is able to direct from the derrick floor the output of each of the generators. Next in line between the derrick floor and the engine house are the slush pumps. Two 400-horsepower motors and one 600-horsepower motor are used on each of the slush pumps. The other lines from the control room lead to the 800-horsepower motor on the draw works and the 300-horsepower motor which turns the rotary table.

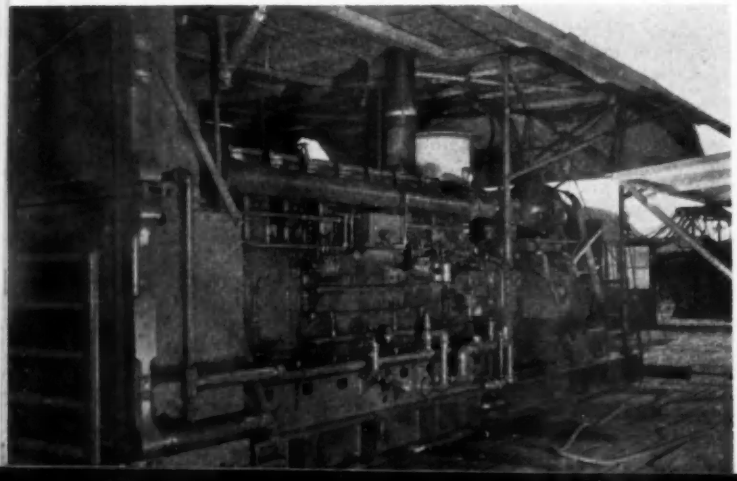
An ingenious motor cooler has been devised by constructing a cover for each motor. Above this cover is mounted a suction line and an electric blower which continuously takes air from a point away from the well head and passes it down through the motor. This allows the motor to operate at slow speeds without overheating. The inlet to the suction line which supplies air to the draw works motor is outside the draw works building and the discharge is directly under the motor.

General layout of the rig showing the engine-house, control room, pump layout, and derrick with the dog house and tool room under the substructure.

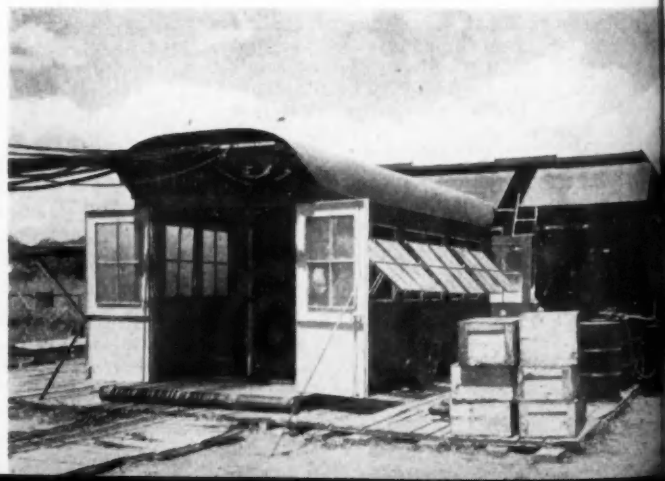
Although this rig was designed for deep drilling, portability was given consideration. Each of the three power assemblies is mounted on skids and only water and fuel lines and power lines need be disconnected in moving. The pumps are streamlined, with unions adjacent to the main body of the pump so they can be disconnected and loaded without projecting connections to bother the truck driver. This also makes it convenient to set another pump in case one of the pumps needs to be shopped. The draw works are in one unit as well as the rotary table and motor assembly.

By using electricity to power the rig, the advantages inherent in this type of power are very apparent around the well. The visitor might imagine he was viewing a stationary power plant instead of a portable drilling rig. The absence of grease and oil and lack of noise is most noticeable. The rotary table has been lowered to a position just above

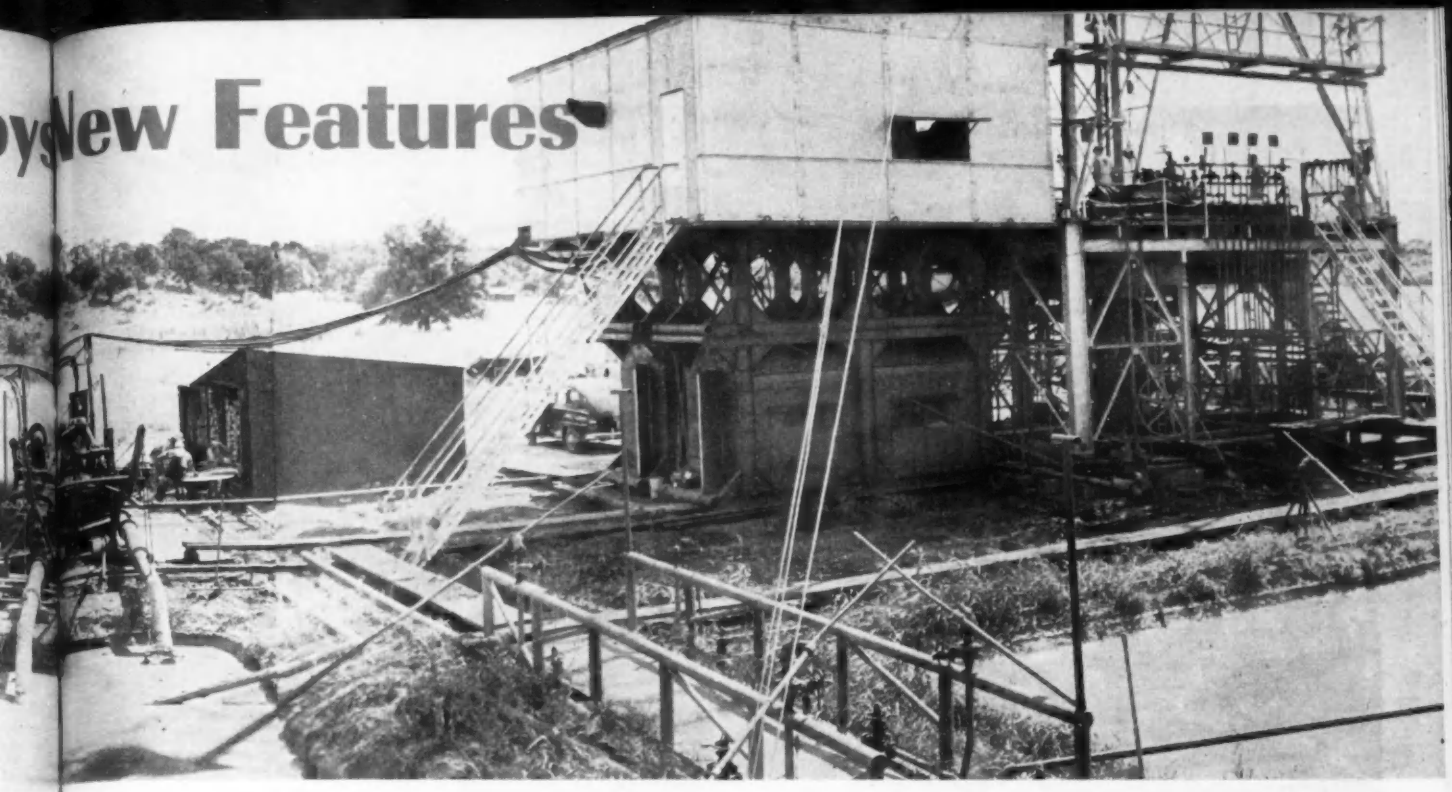
Side view of one of the three engines. 400 kilowatt generator is direct driven. Power cables lead off toward derrick at right.



View of the control building, engine setting in background, cables leading to derrick on the left.



New Features



By HARRY A. HESS
Staff Writer

the derrick floor which facilitates the handling of slips, tongs and drill pipe when a connection is being made. Hoisting speed is less than a stand a minute from a 6000-foot depth, which shows the convenience of the tools, the power of the hoisting equipment, as well as the efficiency of the crews.

Another innovation is a tool house and a dressing room for the workmen beneath the draw works. This unit consists of two buildings, each on separate skids and designed to fit neatly between the members of the substructure. No noise is heard as the men eat their lunch, except for an occasional squeak of the brake as the driller feeds off drilling line.

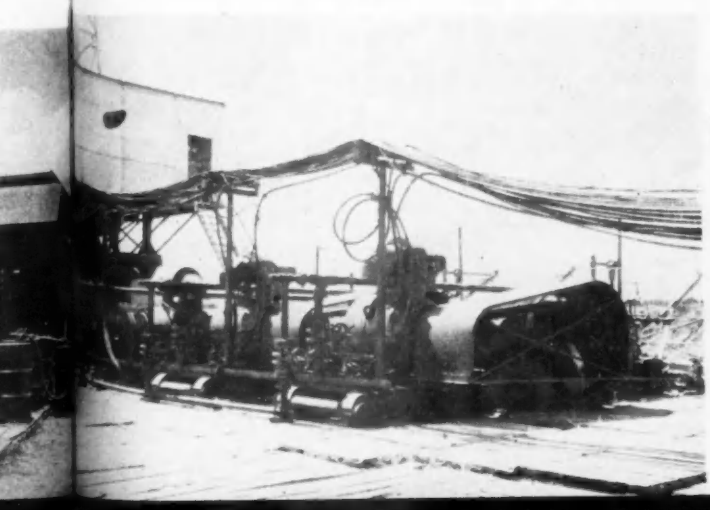
Not content with the above mentioned departures from regular practice in drilling operations, this progressive contractor is trying out two new types of slush pumps. One type of pump in use is three-cylinder, double acting, and operates at a speed up to 70 strokes per minute. Features permitted by the use of three cylinders include low weight per horsepower, compactness, and low pulsation in discharge pressures. The cylinders are cast integrally with the valves, which are placed with the discharge valve over the suction valve so both valves can be removed through one valve cover opening. The design of the main shaft entails the use of three eccentric hubs on the crank throws, which permits all main bearings and connecting rod bearings to be interchangeable. Rowan has been using this type of pump since its inception with a minimum of trouble.

The other pump is in the experimental stage and this is the first installation on a drilling rig. It is of the high speed, multiple-cylinder type with outside packed plungers and operates at a top speed of 400 revolutions per minute. This allows a direct drive in most instances, which reduces the space and weight considerably. Ten four-inch plungers with three-inch strokes are arranged in two banks of five cylinders each with one connecting rod for each two cylinders which are diametrically opposed. The plungers are single acting and one side is discharging as the cylinder on the other side is taking suction. The valves are of special construction to withstand the high operating speeds required in this type of pump. The diameter of the valves is the same as the diameter of the plungers which allows for a minimum of valve operating travel. The valves are standard fitted with a rubber sealing disc and with a combination rubber guide sleeve and bumper which operates within a tubular steel stationary guide attached to the valve cap. Steel valve springs are used to urge the valves to seat with a minimum of slip. The plungers touch nothing but the outside packing, which is simple and inexpensive. The packing is self-sealing, non-adjustable and this installation is thought to be the first outside packed pump to be used as a slush pump. This pump has been in operation nearly continuously on this well without any serious trouble.

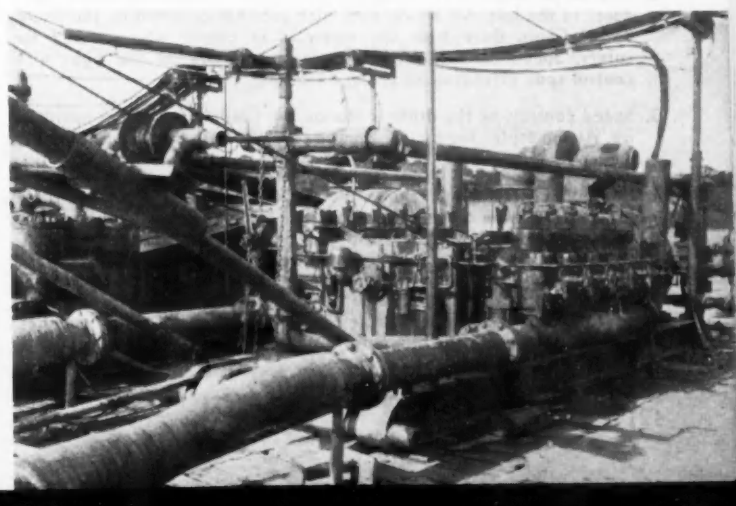
Other features included in this rig are described by accompanying photographs.

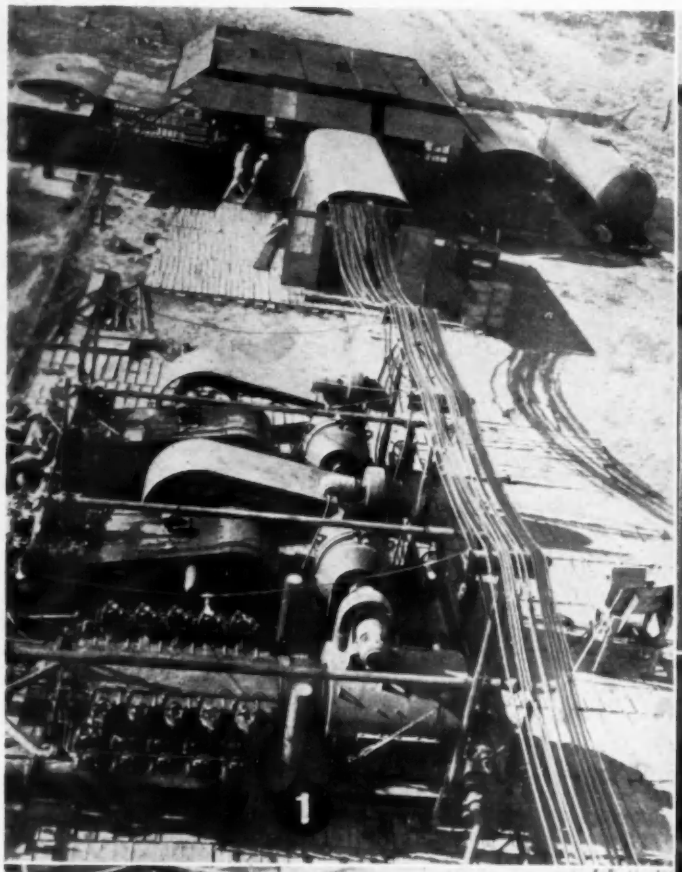
(See Page 42)

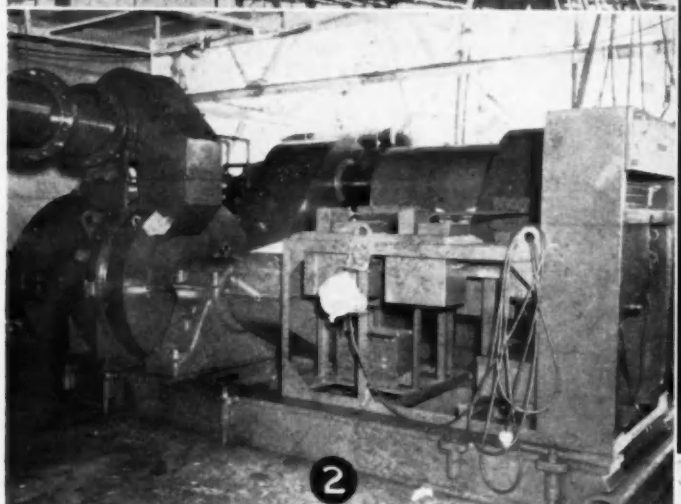
...e slush pumps, with cables leading to electric motors which are covered ...d force draft cooled. First two pumps are belt driven, the third direct connected.

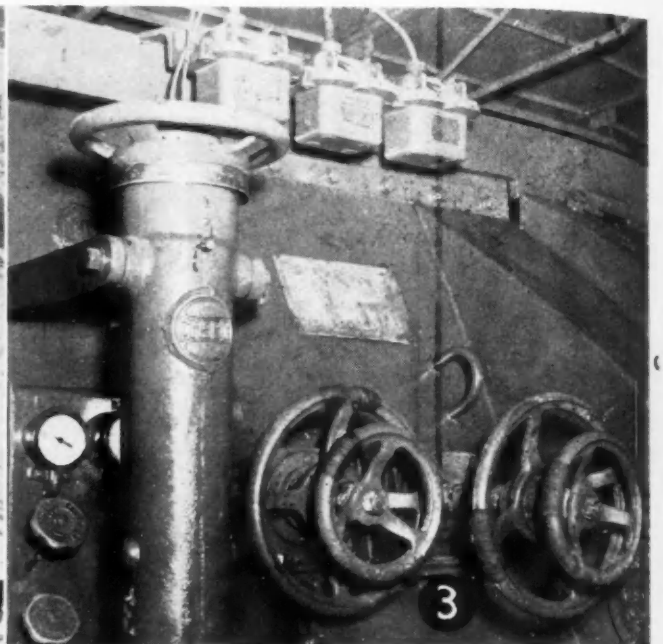


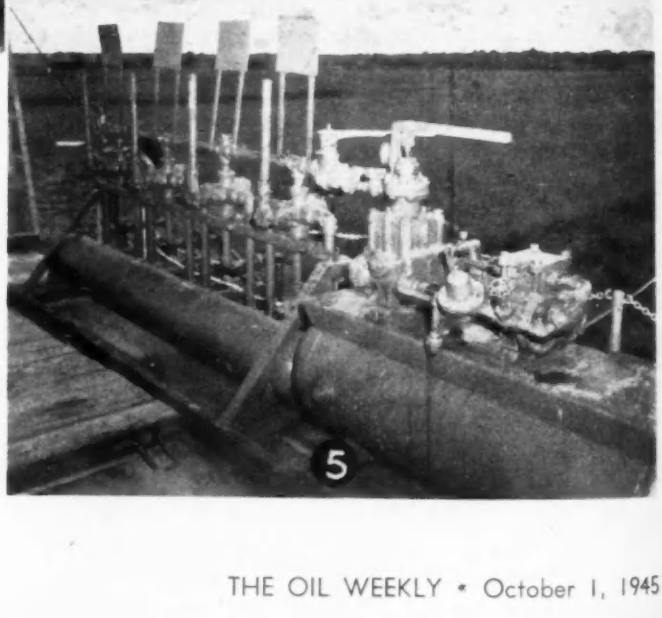
Closeup of the ten-cylinder mud pump showing tandem arrangement of cylinders and valves. Suction lines are on the left, discharge on the right.











1. View of the engine to control room to pumps to derrick floor arrangement, taken from the roof of the draw works building.

2. Interior of draw works room, showing 800 horsepower motor with cover to the left. Air blower and inlet duct are mounted on the motor cover. Chain drive from the motor is in center, also covered for safety. Speed controls for the various units are on the right with control rods extending to driller's station.

3. Speed controls at the driller's station are similar to a steam-operated rig. At the top of the picture can be seen the switches that enable the driller to shift the power of the genrators to various motors.

4. Unitized control panel shows the driller the speed of rotary table (top left) and the amperage and voltage pulled by each of the motors. Weight indicator and mud pump gauge are placed close by.

5. Blowout preventer equipment is usually connected to the discharge of the feed water pumps. Since no feed water pumps were used, an air tank was set which operates an hydraulic pump which supplies pressure to operate the blowout preventer valves.

Drilling Cost Accounting

Continental Oil Company's discovery well, Borden 1, in E. S. Wilson survey, Jack County, Texas. According to Mercury Drilling Company's progress sheet, payroll time on this well started May 17, 1945. Moving to new area, laying water lines and rigging up took six days. At ten days below surface, the well was drilling at 4198 feet; at 20 days, 5312 feet; at 30 days, 6084 feet; at 40 days, 6793 feet; plug was pumped down on the oil string at 42-1/3 days under surface, with three days and seven hours of company time for coring, circulating, etc. Overall payroll time to cementing oil string was 53-1/3 days. Footage drilled per overall payroll day less company day time was 137.74 feet per day. Slope tests showed from ¼ to 1½ degrees off vertical down to 6000 feet, from 1½ to three degrees to total depth. Forty-two bits were used. From 4600 feet to total depth mud varied in weight from 9.9 down to 9.2 pounds, viscosity from 32 to 53 and water loss from 11.2 down to 7.2 C.C.s. Lost circulation was encountered at 5963 to 5971 feet and at 6338 feet.

Artificial mud, etc., used on the hole was, by sacks, as follows: Bentonite, 1125; Soda Ash, 33; Quebracho, 15; Caustic Soda, 15; Seal Flake, 14; Mica, 15; Magofiber, 16; Magobar Barite, 123; Hi-Yield, 150.

One fishing job, loss of a drill collar at 4772 feet, caused 15 hours lost time. There was no other down time except for normal repair and maintenance on rig.

At the end of the hole the drill pipe had drilled 27,067 feet of hole with 153-1/3 days of actual service. Operating time since complete overhaul of engines was 53-1/3 days.

By CHESTER H. WESTFALL
President, Mercury Drilling Co.

THE "small" drilling contractor operates a business that would be considered very substantial in any other industry. His equipment has cost some hundreds of thousands of dollars. His annual receipts and expenditures are much larger. Accurate records of costs, profits, losses, assets and liabilities must be kept just as in any other industry, but their value to the contractor lies more largely in their being kept as near current with the operation as possible.

Uncle Sam sees to it that the final records are accurate and that his proper participation is paid. So, accuracy of accounting in the long run takes care of itself. But the sheriff may have to step in if records are not current with operations. In other words, shock comes to various and sundry if the operator suddenly discovers that 90 days ago he went broke.

A contract taken in the belief that a fair profit would result may turn overnight into a certain loss of an indeterminate amount. That's the gamble the drilling contractor must take. His cost accounting "ahead of his books," careful estimates, based on his daily reports and past experience, will enable him to figure his position very closely by the time rotary footage is completed. His accountant receives the bills that tell the sad story to the penny weeks later.

Little Things Count

But profits or losses are more often determined by the little things that enter into operations, the aggregate costs that creep up without any noise; or a small decrease in overall footage drilled per day, an item that after all comes near to reflecting complete costs. Nothing except a most current cost accounting and progress system will take care of these things.

Perhaps there used to be a tendency on the part of many contractors to keep their costs secret, both from companies for which they worked and from other contractors. If so, that time seems to have passed. Production superintendents for the companies realize the chance the drilling contractor takes. They want work done by efficient men with equipment in the top of condition. Did they not know that the contractor must have a fair profit with an allowance for the unforeseeables they would not have had the ability to reach their present positions. Most contractors now exchange cost figures freely.

Accounting systems vary only in detail. The small operator who must keep overhead costs at the minimum undoubtedly finds it necessary and possible to take short cuts and use combinations of accounts that large companies cannot do. At the end of this article is a tabulation of accounts that fits the particular needs of our own operations. Mechanical bookkeeping saves much time and provides early exact costs. Discretion on the part of the accountant in entering late bills, not yet approved but certain to be, saves delay.

For current cost accounting purposes, Mercury Drilling Company uses a past experience proven figure per overall payroll day for overhead and depreciation, except depreciation on drill pipe, which is depreciated on a daily use-in-hole basis. Past experience must be used in arriving at this round figure as the depreciation on a rig while drilling must cover not only the rig itself during the actual time of this operation, but also during down time between contracts or during overhaul or transportation from location to location or from area to area. The depreciation also must cover general standby equipment used on this and other rigs, tool pushers' cars and even office equipment in field and central offices.

Pre-Cost System

A good accounting system gives in due time the necessary record of profits or losses. The small contractor needs, and on account of his limited number of operations can keep progress records that in effect are a "pre-cost accounting system."

Mercury Drilling Company does this by keeping a complete daily graphic record on each rig, taken from drilling reports sent to the Tulsa office and supported by the geolograph logs which accompany each report. This enables us, with the application of some rule of thumb principles, to estimate far in advance of the accountant's report where we are coming out on a job. Mercury's graphic record shows days horizontally, depths vertically. On the left side of the progress line is shown footage drilled each day. On the right hand are shown slope tests, condensed detail of anything unusual and a record of anything that delayed operations. At the top on the right is kept a running record of bits used, footage made and time run; and below on the left is a complete mud record from the drillers' reports, showing dates and amounts of mud materials added, weight, viscosity and water loss of drilling fluid. A place is reserved to show points of lost circulation and anything else unusual in the drilling of the well. When the well is completed there is added at the bottom a typed summary showing rigging up time, depths by ten-day periods, overall time to total depth, average footage drilled per overall day, total footage since purchase and time in actual operation of the drill pipe string, operating days of the drilling engines since last complete overhaul and names of oil company representatives contacted during the carrying out of the contract.

The experience record of each rig shows the normal cost per overall day of running that rig, and it is surprising how uniform is that normal overall cost, whether the time is used in rigging up, drilling, circulating, coring, fishing, waiting for orders or what not. An examination of that progress sheet of days' opera-

"Time Card"

STATE: Texas — YEAR: 1945

~~JANUARY~~ – JULY | ~~FEBRUARY~~ – AUGUST | ~~MARCH~~ – SEPTEMBER

	REF. NO.	O C C P.	B.R.	R.T.	O.T.
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3	✓	✓	✓	8	
4	✓	✓	✓	→8	
5	✓	✓	✓	8	
6	✓	✓	✓		8
7	✓	✓	✓		8*
8	✓	✓	✓	8	
9					
10	D86	D.M.	1.10	8	
11	✓	✓	✓	8	
12	✓	✓	✓	8	
13	✓	R.D.	1.55	8	
14	✓	✓	✓		8
15	✓	✓	✓	8	
TOTAL				56 24	24 8*
BASE RATE WAGES				86 26	80 40
OVERTIME WAGES DT →				55 24	80 80
TOTAL EARNINGS				193	80
O. A. B. DEDUCTIONS 1.94					
OTHER DEDUCTIONS W.T. 27.60				29	54
NET AMOUNT CHECK				164	26
CHECK NO.				1245	

*HOLIDAY

	REF. NO.	O C C P.	B.R.	R.T.	O.T.
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19	✓	✓	✓	8	
20	✓	✓	✓		8
21	✓	✓	✓		8D
22	✓	✓	✓	8	
23	✓	✓	✓	8	
24	✓	✓	✓	8	
25	✓	✓	✓	8	
26	✓	✓	✓	8	
27	✓	✓	✓		8
28	✓	✓	✓		8D
29	✓	✓	✓	8	
30	✓	✓	✓	8	
31	✓	✓	✓	8	
TOTAL				96	16 16D
BASE RATE WAGES				148	80
OVERTIME WAGES DT →				37 49	20 60
TOTAL EARNINGS				235	60
O. A. B. DEDUCTIONS 2.36					
OTHER DEDUCTIONS W.T. 36.80 ADV. 100.00				139	16
NET AMOUNT CHECK				96	44
CHECK NO.				1456	

$ADV. BY DRAFT $100.00 7/25/45

	REF. NO.	O C C P.	B.R.	R.T.	O.T.
1	D86	R.D.	1.55	8	
2	✓	✓	✓	8	
3	✓	✓	✓		8
4					
5					
6					
7	D87	R.D.	1.55	8	
8	✓	✓	✓	8	
9	✓	✓	✓	8	
10	✓	✓	✓	8	
11	✓	✓	✓	8	
12	✓	✓	✓	8	
13	✓	✓	✓	8	
14	✓	✓	✓	8	
15	✓	✓	✓	8	
TOTAL				88	8
BASE RATE WAGES				136	40
OVERTIME WAGES DT →				18	60
TOTAL EARNINGS				155	00
O. A. B. DEDUCTIONS 1.55					
OTHER DEDUCTIONS W.T. 18.90				20	35
NET AMOUNT CHECK				134	65
CHECK NO.				1555	

	REF. NO.	O C C P.	B.R.	R.T.	O.T.
16	D88	R.D.	1.55	8	
17	✓	✓	✓		8
18	✓	✓	✓		8D
19	✓	✓	✓	8	
20	✓	✓	✓	8	
21	✓	✓	✓	8	
22	✓	✓	✓	8	
23	✓	✓	✓	8	
24	✓	✓	✓		8
25	✓	✓	✓		8D
26	✓	D.M.	1.10	8	
27	✓	✓	✓	8	
28	✓	✓	✓	8	
29	✓	✓	✓	8	
30	✓	✓	✓	8	
31	✓	✓	✓		8
TOTAL				48 16 8 40	16 16D
BASE RATE WAGES				74 44	40 00
OVERTIME WAGES DT →				37 13 49	20 20 60
TOTAL EARNINGS				218	40
O. A. B. DEDUCTIONS 2.18					
OTHER DEDUCTIONS W.T. 32.30				34	48
NET AMOUNT CHECK				183	92
CHECK NO.				1673	

	REF. NO.	O C C P.	B.R.	R.T.	O.T.
1	D88	D.M.	1.10	8D	
2	✓	✓	✓	8	
3	✓	✓	✓	8	
4	✓	✓	✓	8	
5	✓	✓	✓	8	
6	✓	✓	✓	8	
7	✓	✓	✓		8
8	✓	✓	✓		8D
9	✓	✓	✓	8	
10	✓	✓	✓	8	
11	✓	✓	✓	8	
12	✓	✓	✓	8	
13	✓	✓	✓	8	
14	✓	✓	✓		8
15	✓	✓	✓		8D
TOTAL				80	16 24D
BASE RATE WAGES				88	00
OVERTIME WAGES DT →				26 52	40 80
TOTAL EARNINGS				167	20
O. A. B. DEDUCTIONS 1.67					
OTHER DEDUCTIONS W.T. 3.30				22	97
NET AMOUNT CHECK				144	23
CHECK NO.				1742	

	REF. NO.	O C C P.	B.R.	R.T.	O.T.
16	D88	D.M.	1.10	8	
17	✓	✓	✓	8	
18	✓	✓	✓	8	
19	✓	R.D.	1.55	8	
20	✓	✓	✓	8	
21	✓	✓	✓		8
22	✓	✓	✓		8D
23	✓	✓	✓	8	
24	✓	✓	✓	8	
25	✓	✓	✓	8	
26	✓	✓	✓	8	
27	✓	✓	✓	8	
28	✓	✓	✓		8
29	✓	✓	✓		8D
30	✓	✓	✓	8	
31					
TOTAL				24 64	16 16D
BASE RATE WAGES				26 99	40 20
OVERTIME WAGES DT →				37 49	20 60
TOTAL EARNINGS				212	40
O. A. B. DEDUCTIONS 2.12					
OTHER DEDUCTIONS W.T. 32.50				34	42
NET AMOUNT CHECK				177	98
CHECK NO.				1933	

OCCUPATION ABBREVIATIONS

R. D.—ROTARY DRILLER
D. M.—DERRICK MAN
E. H.—ENGINE MAN
R. H.—ROTARY HELPER
H. C. D.—HEAD CABLE DRILLER
C. D.—CABLE DRILLER
T. T. D.—TANDEM TRUCK DRIVER
T. D.—TRUCK DRIVER
T. H.—TRUCK HELPER
S.—SUPERINTENDENT
P.—PUMPER
R.—ROUSTABOUT
C.—CLERICAL
W.—WATCHMAN

REF. NO. ABBREVIATIONS

D.—DRILLING EXPENSE
P.—PRODUCTION EXPENSE
F.—FIELD EXPENSE
G.—GENERAL EXPENSE
T.—TRUCK EXPENSE
F. I.—FARM INVESTMENT
A.—AUTHORIZATIONS

WITHHOLDING TAX COLUMN #3

QUARTERLY EARNINGS REPORT

TOTAL EARNINGS	1182 40
TOTAL O. A. B. DEDUCTIONS	11 82
TOTAL W.T. OTHER DEDUCTIONS	169 10

HISTORY RECORD RECEIVED 7/10/45

EMPLOYMENT CONTRACT RECEIVED 7/10/45

John Doe

S. S. NUMBER 000-00-000

FIGURE 1

tions, with allowances for extraordinary fishing, transportation, water supply and any other unusual expense, permits a surprisingly close estimate of overall costs ahead of the final accountant's report.

In addition to serving our own operating needs, we have found that a photostat of our "yellow sheet" or progress record, which on a 7500-foot well becomes a sheet approximately 50 x 60 inches, together with photostats of the complete geolograph logs, is a valuable addition to the records of the company for which the well is drilled.

Payroll accounting, with all its recent complications of regular time, overtime, double time, holiday pay, O. A. B., withholding tax, quarterly reports, etc., presents an accounting problem for which the small operator must find short cuts usually not resorted to by the larger companies. Mercury Drilling Company, after much trial and error, designed its own visible card system by which two cards, 8½ x 11 inches, used on both sides, show an employe's complete record for one calendar year. This card shows for each payroll day, for the respective employe, the job reference number, occupation, base rate for the job and base rate days and overtime days worked. The card was designed before the double time regulation, so a "D" indicates his double time days. "Remarks" leaves a space to record any advances. The summary for each half month period shows his base rate, overtime and double time wages, with total earnings, and his deductions for O. A. B., withholding tax and any advances, and net amount of check with check number.

These cards make available for immediate consultation the complete record of any employe at any time. Except for the regular drilling, production, truck and office reports, this is the only record kept on the employe and constitutes the accounting payroll record. From the respective employe's card a chart, made up to fit our employe classifications and rates, is consulted and the earnings are arrived at without necessity of computation. Another chart gives the amount of the withholding tax in the same way. From these cards the entry to the books is prepared and a control is kept on payroll by each state for the purpose of government reports. At the end of the year, the four quarterly summarys for each employe are added up for the annual payroll reports to employes and government. At the end of the year, these cards are filed alphabetically and are immediately available for consultation or government audit. If 450 men are employed in one year, our approximate turnover, a total of much less than 900 cards are in the year's file, requiring approximately 12 inches in a filing cabinet.

On the "John Doe" employment card shown in Figure 1, John Doe was under employment on July 1 on D85, or referring to the "ref. on abbreviations," drilling expense, job 85. His occupation was "R.D." or rotary driller. His "B.R." or base rate was $1.55. In the "R.T." or regular time column, he worked July 1, 2 and 3. In the "O.T." or overtime column, he worked eight hours on July 4, a holiday. On July 5 his eight hours went back in the "R.T." column to complete his 40 hours in the work week, and his eight hours on the 6th and 7th went in the "O.T." column, the eight hours on the 7th having a "D" written beside it, indicating double time for the seventh consecutive day in the work week. Doe worked on July 8 as a driller, was off on the 9th, then came back on the 10th as a "D.M." or derrick man, at a base rate of $1.10 per hour, working on "D86" or drilling job No. 86. On the 13th he went back to "R.D." or rotary driller on the same job at the changed rate, and continued through the 15th. He had eight hours in the "O.T." column for the 14th but no double time in that week. Under the "Total" of hours worked, he had "R.T.," regular time, hours of 56 at driller's rate, 24 at derrick man's rate. Under "O.T." he had 24 hours at time and ½, and an "8D," double time, at driller's rate. His base rate wages were $86.80 as a driller, $26.40 as a derrick man; his time and ½ wages were $55.80 and his double time wages were $24.80, all at a driller's rate. His O. A. B. deduction was $1.94, his "W.T." or withholding tax, was $27.60, or a total of $29.54. Net amount of check No. 1275 was $164.26.

"Doe" worked most of the rest of the month on different jobs at different rates and on July 25 was advanced $100 on account to take care of an emergency. The $100 is duly recorded under "Re-

marks" in the column summary for the second half of July and is deducted from his check. The complete explanation of John Doe's earnings for the pay period is duly set out on the voucher attached to his check.

Chart of Accounts

The accounts shown in the following chart provide an analysis of costs sufficiently detailed for our needs. Income and expense accounts are kept separate so that there is no confusion by the combining of the accounts. From this set of accounts monthly balance sheet and profit and loss statements are prepared. The accountant can present statements by the 10th to the 15th of the following month by the use of mechanical bookkeeping.

Attention is called to the account listed under the title "Field Expense." The charges entered in this account against the drilling operations are such charges that at the time cannot be charged to any one drilling operation. When the charges going to this account are all in for the month, the total is distributed over all the drilling operations for that month on a daily basis, determined by the number of days each contract was in progress for that month.

1 ASSETS
- **11 Current Assets**
  - 111 Cash in Bank
  - 112 Accounts Receivable
  - 113 Notes Receivable
  - 114 Cash Deposits
  - 115 Suspense
  - 116 Work in Progress
  - 117 Warehouse Stock (Detailed Ledger)
- **12 Fixed Assets**
  - 121 Producing Oil and Gas Royalty
  - 122 Nonproducing Oil and Gas Leases
  - 123 Nonproducing Oil and Gas Royalties
  - 124 Rotary and Cable Tools
  - 125 Warehouse Investment
  - 126 Drill Pipe and Tool Joints
  - 127 Motor Vehicles
  - 129 Furniture and Fixtures
  - 130 Farm Investment
    - 13101 Leasehold
    - 13102 Intangible Development Costs
    - 13103 Tanks and Separators
    - 13104 Pumping Units
    - 13105 Casing
    - 13106 Tubing and Rods
    - 13107 Pipe Line, Valves and Fittings
    - 13108 Buildings
    - 13109 Well Head Connections
    - 13110 Other

2 PREPAID ITEMS
- **21 Prepaid Insurance**

3 LIABILITIES
- **31 Current Liabilities**
  - 311 Accounts Payable (An account "Vouchers Payable" also for pen and ink books)
  - 312 Payrolls Payable
  - 313 Notes Payable
  - 314 Accrued Interest Payable
  - 315 Accrued Federal and State Income Taxes

4 DEFERRED CHARGES

5 DEFERRED CREDITS

6 RESERVES
- **61 Reserve for Intangible Development Costs**
- **62 Reserve for Depreciation**
  - 621 Furniture and Fixtures
  - 622 Autos and Trucks
  - 623 Rotary and Cable Tools (Inc. Drill Pipe and Tool Joints)
  - 624 Farm Investment (Equipment)
  - 625 Other
- **63 Reserve for Depletion**

7 CAPITAL AND SURPLUS
- **71 Capital Stock**
- **72 Earned Surplus**
- **73 Profit and Loss**

8 INCOME
- 811 Tool Earnings
- 812 Steam Sales
- 813 Truck Earnings
- 814 Profit and Loss on Sale of Assets
- 815 Interest Earned
- 816 House Rental Received
- 817 Lease Rentals Received
- 818 Discount Earned
- 819 Miscellaneous Income
- 820 Oil Sales Leases
- 821 Gas Sales Leases
- 822 Oil Sales Royalty
- 823 Gas Sales Royalty

9 EXPENSE
- 911 Drilling Expense
  - 91101 Labor, Insurance, Tax
  - 91102 Trucking
  - 91103 Bits
  - 91104 Repairs and Replacements
  - 91105 Welding and Machine Shop
  - 91106 Supplies
  - 91107 Water
  - 91108 Fuel
  - 91109 Mud
  - 91110 Gasoline, Oil, Grease
  - 91111 Fishing
  - 91112 Lumber, Pits, Cellar
  - 91113 Other
  - 91114 Cable
- 912 Production Expense
  - 91201 Labor, Insurance, Tax
  - 91202 Trucking
  - 91203 Fuel
  - 91204 Lubricants
  - 91205 Supplies
  - 91206 Repairs and Replacements
  - 91207 Well Service
  - 91208 Taxes
  - 91209 Other
- 913 Drilling Expense
  - 91301 Labor, Insurance, Tax
  - 91302 Office and Warehouse
  - 91303 Traveling
  - 91304 Trucking
  - 91305 Repairs and Replacements
  - 91306 Telegraph and Telephone
  - 91307 Other
- 914 Auto Expense
  - 91401 Gasoline, Oils, Greases
  - 91402 Repairs and Replacements
  - 91403 Tires and Tubes
  - 91404 Other
- 915 Truck Expense
  - 91501 Gasoline, Oils, Greases
  - 91502 Repairs and Replacements
  - 91503 Tires and Tubes
  - 91504 Labor, Insurance, Tax
  - 91505 Other
- 916 General Expense
  - 91601 Officers Salaries
  - 91602 Other Salaries (Office)
  - 91603 Office Supplies
  - 91604 Legal and Geological
  - 91605 Traveling
  - 91606 Telegraph and Telephone
  - 91607 Dues and Subscriptions
  - 91608 Rent
  - 91609 Insurance
  - 91610 Taxes
  - 91611 Other
- 917 Other Expenses
  - 91701 Wire Line Expense
  - 91702 Rotary Hose Expense
  - 91703 Interest Paid
  - 91704 Taxes Paid
  - 91705 Surrendered Leases
  - 91706 Lease Rentals Paid
  - 91707 Dry Hole Expense
  - 91708 Loss on Bad Debts
  - 91709 Depreciation
  - 91710 Intangible Development Costs
  - 91711 Depletion
  - 91712 Abandoned Leases

PAYROLL CHECK

MERCURY DRILLING COMPANY
HUNT BUILDING

No. A 7273

TULSA 3, OKLA. July 20, 1943

PAY TO THE ORDER OF John Doe $ 164.26

MERCURY DRILLING CO. $164 and 26cts

To THE FIRST NATIONAL BANK & TRUST COMPANY
86-1 TULSA 3, OKLA.

MERCURY DRILLING COMPANY
BY Chester B. Westfall
PRESIDENT

H. C. Cook

DETACH BEFORE CASHING. THIS IS YOUR ACCOUNT OF EARNINGS. PRESERVE FOR YOUR RECORDS.

MERCURY DRILLING COMPANY
TULSA 3, OKLAHOMA

No. A 7273

EARNINGS

REGULAR TIME			OVERTIME			DOUBLE TIME			John Doe
HOURS	RATE	AMOUNT	HOURS	RATE	AMOUNT	HOURS	RATE	AMOUNT	PERIOD ENDING 7/15/43
56	1.55	86.80	24	2.325	55.80	8	3.10	24.80	
24	1.10	26.40							

TOTAL EARNINGS 193.80

DEDUCTIONS

OLD AGE BENEFIT (YOUR PORTION)	1.94
YOUR FEDERAL INCOME TAX—PAID BY US TO U. S. GOVERNMENT FOR YOUR ACCOUNT	27.60
TOTAL DEDUCTIONS	29.54
NET AMOUNT THIS CHECK	164.26

"Joe Doe" payroll voucher to illustrate Mercury Drilling Company's method of payment for men in the field listed on the company's "time card."

From this set of accounts statement can be prepared showing costs on each rotary drilling contract, as follows:

STATEMENT

_____ Company

_____ Well No. _____

_____ County, _____

Statement prepared _____ 1945

Date payroll commenced	
Date payroll ended	
Rig No.	
Total overall tours on footage contract	
Total company daytime tours to drilling T. D.	
Total footage	
Income per foot	
Income—company time	

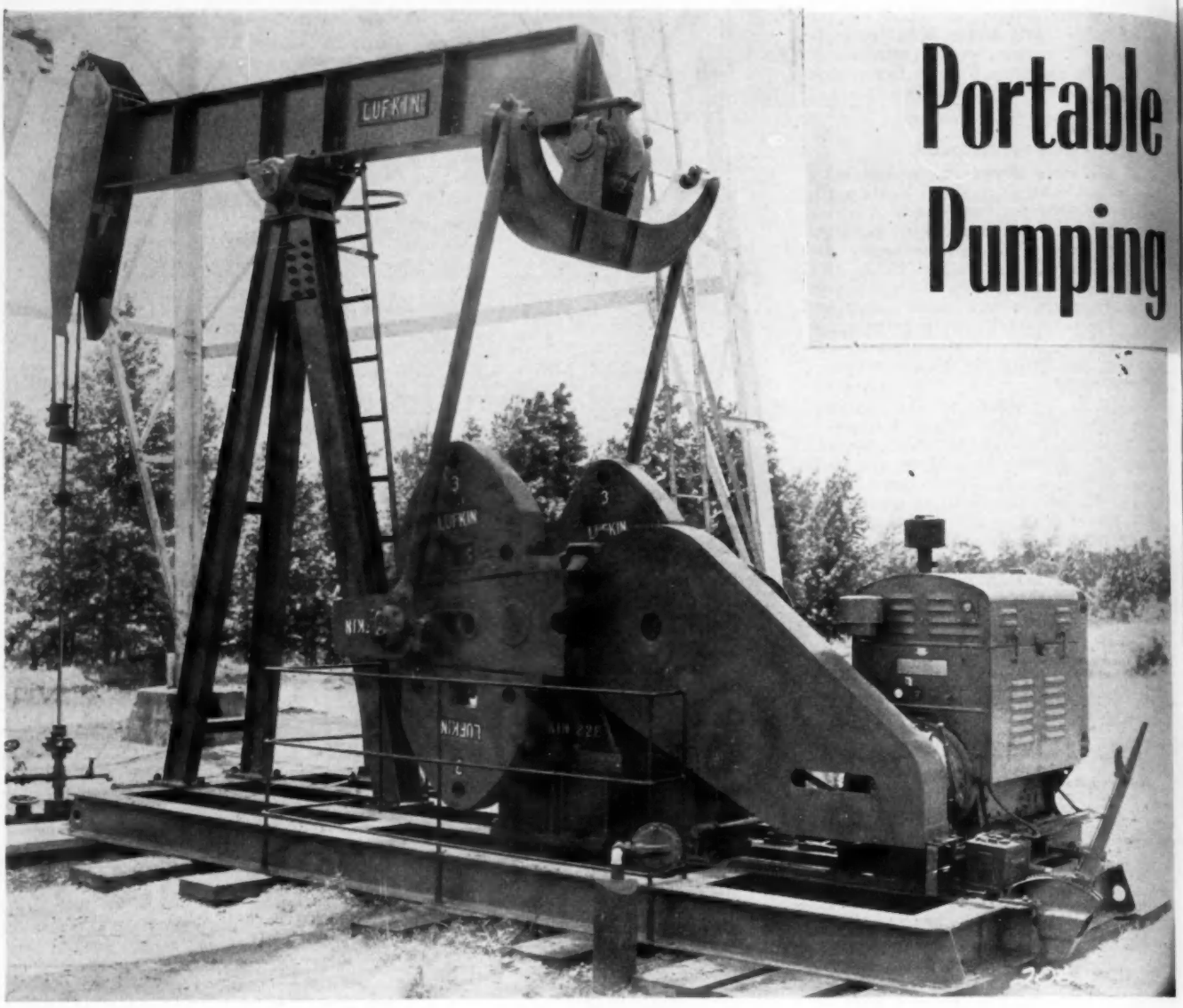
Direct Costs

Labor, Insurance, Tax	
Lumber	
Surface casing	
Cement and cementing service	
Pits, cellar, etc.	
Trucking	
Contracted	
Company	
Bits	
Repairs and replacements	
Overhaul expense	
Supplies	
Water	
Fuel	
Natural gas	
Butane	
Diesel	
Mud	
Gasoline, Oils, Greases	
General field expense	
Derrick expense	
Fishing expense	
Other expense	
TOTAL DIRECT COSTS.	$_____

Indirect Costs

Depreciation of rig and general overhead (rule of thumb figure)	$_____
Depreciation—drill pipe, wire lines and rotary hose (by footage drilled).	
TOTAL INDIRECT COST	$_____
TOTAL OVERALL COST.	$_____
REVENUE	
Contract footage	
Day work	$_____
ROTARY PROFIT OR LOSS	$_____
Overall cost per foot	$_____
Overall cost per payroll day	$_____
Average footage drilled per overall day less day work time	

Portable Pumping



Complete pumping unit mounted on portable base, which eliminates need for concrete foundation. A sub-base between the gear box and the unit base provides ample crank clearance.

By A. E. CARAWAY, District Manager,
Lufkin Foundry & Machine Company, Kilgore, Texas

ECONOMICAL operation is a function of all operations and all purchases from the drilling to the depletion and abandonment of the well.

Many have felt that the urge for economy was sufficient reason to purchase inferior equipment of poor design, poor materials, poor manufacture, and poor service. A dollar pulled out of the initial pot for buying equipment is almost without exception used later in the operation of the machinery for repairs. However, the replacement cost is small when compared to down time, labor cost, truck expense and lost production which necessarily must be a part of the expense of parts replacement and machinery repairs. We do not intimate that any equipment will operate to the end without repairs and fold up as did the one-horse shay, but the better machinery will and does operate with less trouble and less expense.

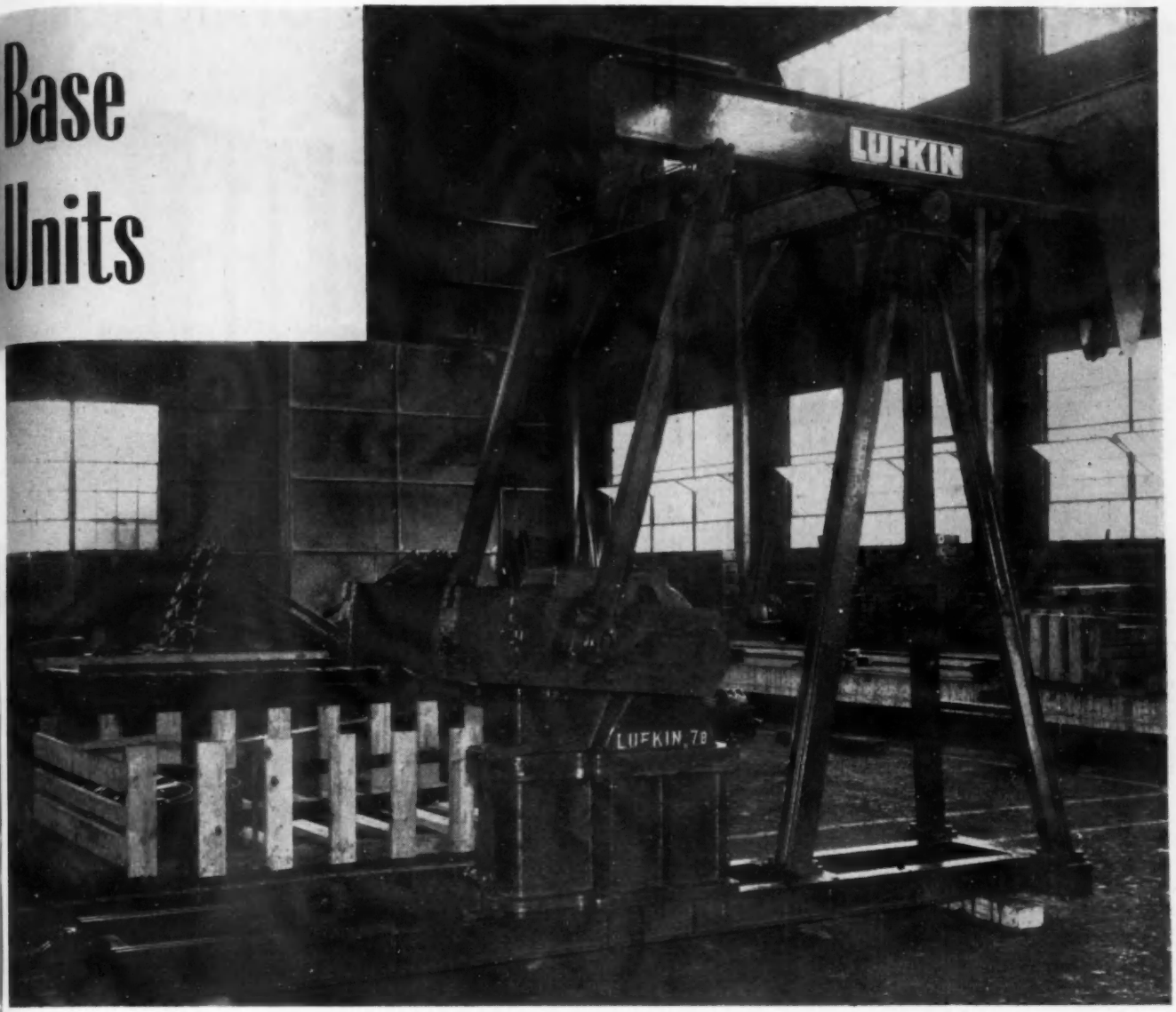
Therefore, the selection of the proper equipment of the optimum size from a manufacturer who furnishes good machinery properly serviced is the first step toward economical operation. Many operators pay considerable more for the initial outlay of equipment and by this purchase of the best available, they cut down on labor and replacement cost to such an extent that their lifting cost per barrel may be several cents under the average of the field. Time spent in comparing the best available equipment is well spent.

Real Economy

Thus far we are just reviewing our country-boy common sense lessons. It takes no master-mind to tell us that a bowl of Irish stew is fine for a light job of running the mower over the lawn but that a drilling crew needs something that sticks to the ribs better and longer. So we start on the basis that good equipment in a capacity large enough to do the job long and well is being considered. Then the particular application may be made to best fit the needs of the job. Several "money savers" will be discussed in this and later articles.

In the East Texas field and in many other areas where operators feel that the life of the well may be short, it has been found profitable to use a portable base pumping unit to eliminate the cost of a concrete foundation. Present prices vary on cost of concrete block installation between $325 and $600 less engine house and well service work. Prices in Louisiana and Mississippi run considerably higher because of the number of yards of remix used and the higher cost per yard. West Texas installation prices are more uniform than any other area and run high to other sections of Texas. Assuming a low-average price of $500 for block and erection, there is the added cost of tearing out and removing

Base Units



View of sub-base used to provide ample crank clearance when pumping unit is set at ground level.

this material when the well is depleted and the lease cleared. Many west-side wells in the East Texas field and some east-side production, either having been produced by other methods of artificial lift or failing fast because of water encroachment on west side, have a short anticipated period of production at an operating profit.

In such case the portable base unit may save the greater part of the original installation cost and the whole of the of tearing out the foundation. This saving of $500 to $800 is effected by an increase of approximately $250 to the cost of the standard base pumping unit. This portable base unit is different from the standard unit only in that four full-length beams properly crossbraced and tied are used instead of the conventional two full length beams. The four beams give a box arrangement approximately 7 feet wide by 22 feet long, depending on size and type of pumping unit. A sub base, either cast iron or fabricated, is used between the gear box and the portable base to raise the gear case sufficiently to provide crank sweep above ground level. This crank-sweep clearance eliminates the need of sumps or timbers underneath the unit base to raise the unit for the required clearance. This arrangement allows the unit to be set directly on ground, or for protection of base beams against ground moisture and rust, 2-inch thick boards may be placed under the base members. The low setting of the unit allowed by the sub base teams with the wide portable base to eliminate weave and movement in structure while the unit is pumping.

The outside members of the base serve well as support for guards if these are desired. Holes may be cut in flanges of beams, or sockets may be welded onto beams into which the legs of the guards are dropped, furnishing a sturdy and self-contained system of guards.

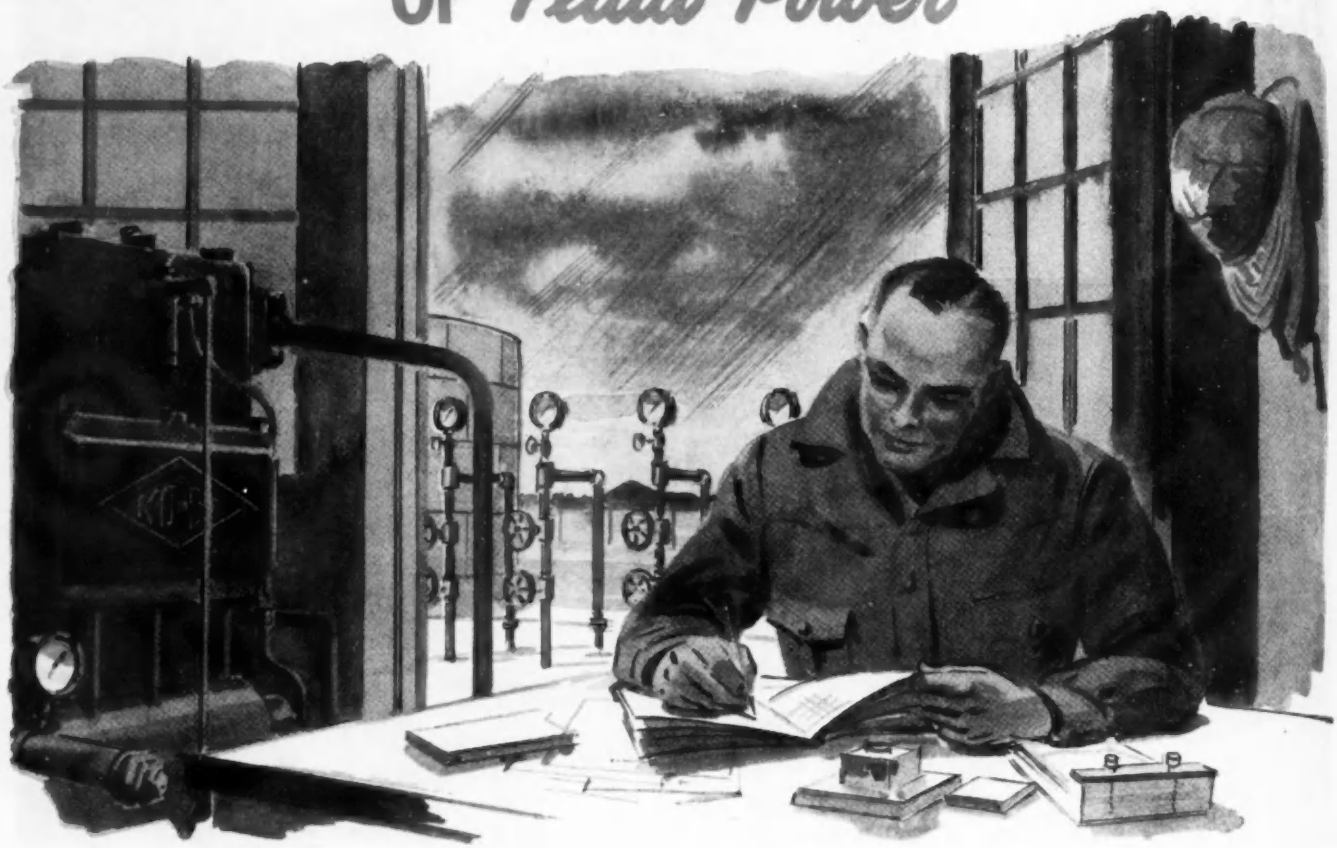
Ease of Portability

The sturdy construction of such a base makes it convenient to move from location to location without tearing down and re-erecting at each move. This ease of portability makes such a unit a money saver for the larger operator who likes to test the well before a decision is made on permanent equipment to produce. Some wells are not productive enough after their natural flow has ceased to make artificial lift profitable. A portable base unit may save several hundred dollars in the checking and testing of such a well.

This one feature of construction will not fill the piggy bank of all operators, many of whom have assured long life pumping wells. It will in many cases effect an appreciable saving. In other cases it may be desirable not to use the whole portable assembly but only the cast-iron sub base between gear box and fabricated base of unit. This allows the unit to be set much lower and still provides crank clearance without a sump or hole for the cranks which in most cases is not desirable. The saving in concrete allowed by this lower setting of the unit will more than offset the additional cost of the sub base required for this clearance.

These and many more time and money-saving ideas can come from your sales engineer who is a specialist in his line and welcomes the opportunity to work with you on all equipment and production problems. Photos showing the portable base unit with sub base and the sub base only are shown to allow clearer conception of their application to production.

GIVE YOUR PUMPERS THE ADVANTAGES OF *Fluid Power*



In the competitive days ahead, pumping costs will have to be lowered. Head work will need to substitute for leg work, and the equipment furnished operating personnel will have a large influence on results. Better pump management pays!

You're in step with the push button age when FLUID POWER drives your pumps. Fluid Power is the pumper's "radar" eye, showing him what is happening in each and every pump a mile away and two miles down. Like a "battle control station," he can read the score and call his shots by a simple twist of a valve

A Fluid Power manifold for multiple well pumping, the surface gage and valve, controlling each well, is always under the watchful eye of pumper

Pumpers get the facts on bottom hole changes rapidly by counting pump strokes and watching pressures on handy surface gages. These are grouped at the *fluid power* distributing manifold, one for each well, to give a visible overall picture at a glance.

Pumping profits increase with accurate knowledge of operating conditions. Fluid Power controlled pumps respond instantly, enabling the pumper to keep operations on the maximum efficiency level and to reduce losses that follow poor pump management, and result in costly repairs and delays. Get in touch with your Kobe representative and see how your operations will be benefitted through the use of fluid power

PUMP THE MODERN WAY — USE KOBE

ONE OF THE DRESSER INDUSTRIES

KOBE

KOBE, Inc.—General Offices & Plant. 3040 East Slauson Ave., Huntington Park, Calif. Mid-Continent Division Offices and Shops: 230 S. E. 29th St., Oklahoma City, Okla. California Division Offices: 217 Wilson Bldg., Huntington Park, Calif. Export Agent: Petroleum Machinery Corporation, 30 Rockefeller Plaza, New York, N. Y.

HYDRAULIC PUMPING SYSTEM

Wildcat Completions Decline

EXPLORATORY well completions, like completions generally, declined in August, apparently in response to the unsettled conditions brought about by the end of the war. In earlier months there had been some decrease in the vigor of searching for new oil, probably because of increasingly difficult economic considerations, such as frozen crude prices and high costs of finding new reserves. The end of the war reduced the urgency for finding new fields, and in August the deterrents to wildcatting were accentuated.

During the month, exploratory wells were completed at the rate of 85 per week, a decrease from the 90 weekly of July, and only a little more than the average of 82.8 per week for the first eight months of 1945, which period included at the beginning the several winter and early spring months when all drilling regularly is seasonally retarded.

Although original schedules and objectives for 1945 called for an increase of over 15 percent in wildcatting as compared with 1944, it now is indicated fairly definitely that such a gain will not materialize, although the scheduled 5000 wildcat completions still would be quite desirable, in spite of the end of the war, in view of the unaltered need for new reserves.

In the first eight months of 1945 exploratory wells were completed at a weekly rate only 2.8 percent above that for the corresponding months of 1944, rather than at the desired rate over 15 percent above last year, the rate having been raised only to 82.8 per week from 80.6 weekly in 1944. For the month of August, the 85 completions per week were materially under the 97 weekly of August last year. From these figures it is apparent, in view of current distinct lagging of exploration, that exploratory completions for the whole year are likely to fall considerably short of the 4300 recorded for 1944, instead of showing any increase.

This prospect makes it appear quite possible that official estimates on U. S. crude reserves as of the end of this year will be lower than were those as of the beginning of the year. For in 1944 the United States proved up comparatively little more new reserves than it used up of old reserves, in spite of the record-breaking 4300 exploratory completions. This year production set new records for the first eight months and will be very great for the year as a whole, in spite of recent cutting back, while as previously indicated, exploratory completions probably will be less numerous than last year.

Summary of Results of Exploratory Drilling

ITEM	Aug., 1945	July, 1945	JANUARY-AUGUST 1945	1944	Precent Diff.
Oil Discoveries	43	38	312	301	+ 3.7
New Fields	35	29	221	208	+ 6.3
New Pays	8	9	91	93	— 2.2
Distillate Discoveries	3	5	29	27	+ 7.4
New Fields	3	5	23	19	+ 21.1
New Pays			6	8	— 25.0
Gas Discoveries	9	9	74	85	— 12.9
New Fields	8	6	62	73	— 15.1
New Pays	1	3	12	12	.....
Total Discoveries	55	52	415	413	+ 0.5
Extensions to Fields	10	19	114	122	— 6.6
Oil Fields	9	9	88	91	— 3.3
Distillate Fields	.....	3	7	8	— 12.5
Gas Fields	1	7	19	23	— 17.4
Total Prod. Tests	65	71	529	535	— 1.1
Dry Holes	360	289	2,369	2,364	+ 0.2
(Weekly Average)	72.0	72.3	67.7	65.7	+ 3.1
Wildcats	352	288	2,311	2,293	+ 0.8
New Pays	3	1	30	13	+130.8
Outposts	5	.....	28	58	— 51.7
Total Expl'tory Tests	425	360	2,898	2,899	— 0.03
(Weekly Average)	85.0	90.0	82.8	80.6	+ 2.8
Percent Productive (Weekly Average)	15.3	19.7	18.2	18.5	.....
Percent Dry (Weekly Average)	84.7	80.3	81.8	81.5	.....

Dry hole completions are from weekly reports and totals represent completions for 5 weeks in August, 1945; 4 weeks in July, 1945; 35 weeks in Jan.-Aug., 1945, and 36 weeks in Jan.-Aug., 1944.

Results of Exploratory Drilling in August, and First 8 Months, 1945-1944, by Districts

State or District	AUGUST, 1945													FIRST EIGHT MONTHS, 1945															
	Productive Tests										Unproductive Tests				Productive Tests								Unproductive Tests						
	New Fields			New Pays			Extensions			Total Productive	Wildcats	New Pays	Outposts	Total Exploratory Tests	New Fields			New Pays			Extensions			Total Productive		Wildcats	New Pays	Outposts	Total Dry		Total Exploratory Tests	
	Oil	Gas	Dis.	Oil	Gas	Dis.	Oil	Gas	Dis.						Oil	Gas	Dis.	Oil	Gas	Dis.	Oil	Gas	Dis.	8 Mo. 1945	8 Mo. 1944				8 Mo. 1945	8 Mo. 1944	8 Mo. 1945	8 Mo. 1944
Alabama											1			1		1								1	1	12			12	11	13	12
Arizona																													6		6
Arkansas																									8	26	1	1	28	49	28	57
California	1									1	22			23	5			3			3	1		12	28	187		2	189	203	201	231
Colorado																				1				1	3	2			2	4	3	7
Florida											1			1												10			10	1	10	1
Georgia																										6			6	5	6	5
Illinois	3			1			3			7	36			43	15			19			23	5		62	58	247			247	239	309	297
Indiana	1									1	9			10	3	1		2			2			8	8	71			71	31	79	39
Iowa																										1			1	2	1	2
Kansas	8	1					1			10	35			45	35	7		4			11	4		61	49	224			224	291	285	340
Kentucky	1									1	15			16	7			1			2			10	21	57			57	79	67	100
Louisiana	1			1						2	10			12	16	4		13		4	3	1	2	43	27	93		1	94	93	137	120
North											6			6	5	4		1			2	1		13	8	56			56	58	69	66
South	1			1						2	4			6	11			12		4	1		2	30	19	37		1	38	35	68	54
Michigan	5				1					6	21	1	2	30	11	2		3	2		1			19	12	142	2	5	149	148	168	160
Mississippi											14			14		1	2				3			6	1	85			85	60	91	61
Missouri											5			5					1					1		16			16	4	17	4
Montana											4			4	2						2			4	3	10			10	18	14	21
Nebraska																										3			3	7	3	7
New Mexico											5	1	1	7	2	1		2	1		1			7	7	41	2	1	44	35	51	42
North Carolina											1			1												1			1		1	
Ohio		1		1					1	3	7			10		12		1	1		1	5		20	31	43			43	47	63	78
Oklahoma	8	4	1	1			1			15	32			47	42	11	2	8	4		13	1		81	48	207			207	150	288	198
Tennessee											1			1												2			2	4	2	4
Texas	7	2	2	4			4			19	129	1	2	151	80	22	19	35	4	2	20	1	5	188	216	811	25	15	851	862	1039	1078
E. Texas Border																	2							2	5	10			10	10	12	15
Rest of E. Texas											2			2	2	2			1	1				6	12	41	2	2	45	79	51	91
North Texas	3			1						4	36			40	18	1		9	1		3			32	44	207	4	1	212	201	244	245
West Central				1						1	14			15	11	4		3						18	17	87	4		91	74	109	91
West Texas	2			1			3			6	20	1	2	29	18			9			12			39	35	141	10	7	158	133	197	168
Panhandle											1			1												6	1		7	6	7	6
Upper Coast	1	1	2	1			1			6	21			27	8	5	9	11		1	5		3	42	25	93	4	3	100	87	142	112
Lower Coast	1	1								2	13			15	15	8	7	1	2			1	2	36	51	115			115	129	151	180
Southwest											15			15	6	2	1	2						11	24	79		1	80	105	91	129
South Central											7			7	2									2	3	32		1	33	38	35	41
Utah																													1		1	
West Virginia																									2				2		4	
Wyoming											4			4	3						2			5	12	14		3	17	12	22	24
Total U.S.	35	8	3	8	1		9	1		65	352	3	5	425	221	62	23	91	12	7	87	19	7	529	535	2311	30	28	2369	2364	2898	2899

New Oil and Gas Fields and New Pay Horizons Discovered in the United States in August, 1945

Also Important Extensions to Established Fields

COUNTY	FIELD	COMPANY, WELL AND LOCATION	Date Spudded	Date Completed	Total Depth (Feet)	Completion Horizon (Feet)	[1]Name, Character and Age of Producing Formation	[2]Initial Production Method and Choke	Gravity of Oil	[3]Structure: [4]Method of Discovery	Tentative Evaluation of Discovery or Extension (Opinion of Relative Importance of Area from General Viewpoint of the Industry Based on Pertinent but Necessarily Incomplete Data. Later Development or more Complete data Obviously Might Require Revision of this Tentative Opinion).
		CALIFORNIA—New Oil Field									
Kern	Santiago	Western Gulf's Woodward-USL 2, sect 21-11n-23w, 2 mi off se end Midway-Sunset fld.	7- 9-45	8- 1-45	2678	2460-2670	Leutholtz sd; Mio	F 1200, 0.6% wtr 0.192 mln 11/32"	24	Geol	Due to steep deep, prod area may be small. Surrounding acreage held in lge blocks.
		ILLINOIS—New Oil Fields									
Clay	W. Ingraham	Kingwood's Fulk 1, sw se sw 13-5n-7e	7-14-45	8-21-45	2577	2526-2577	Cypress sd; Miss	P 52, 24 wtr	....	.....	1¾ mi e E. Bible Grove pool; abt 4 mi nw abnd Ingraham pool. Closest dry hole abt ¾ mi. w
Clinton	Huey	Goldschmidt-Schiermann's Jentzen 1, sw ne ne 32-2n-2w	8-24-45	8-14-45	1266	1253-1266	Benoist sd; Miss	P 26, 2 wtr	....	.....	OWWO; orig comp dry and abnd 8-31-44. Dry holes ½ mi e, w and n; one to n reported as having had show of oil. 2 wells now drilling.
Hamilton	W. Rual Hill	Tide Water Assoc. Pet.'s W. B. Johnson 1, se se nw 33-6s-5e	3-15-45	6-19-45	3483	3222-3244	Aux Vases sd; Miss	P 33, 30 wtr	....	.....	1¾ mi nearest prod in Rural Hill pool. Comp in June; not named until disc well estab as commercial well. No additional wells dr in 2½ mos since comp of disc well.
		ILLINOIS—New Oil Pay									
Jefferson	W. Divide	Texas Co.'s K. Bayer 3, ne nw se 23-1s-3e	6-28-45	8- 7-45	2838	2701-2713 2741-	Rosiclare li; Miss McClosky li; Miss	P 488	....	.....	Offset by 3 McClosky wells and 1 dry hole. 1 Rosiclare well comp ¾ mi n. Pool prod. chiefly McClosky, deeper pay; Rosiclare will probably be of minor importance.
		ILLINOIS—Oil Field Extensions									
Edwards	Albion Consol.	Noah's Kershaw 1, ne nw nw 14-3s-10e	7-14-45	8- 7-45	2002	1974-2002	Biehl sd; Penn	P 165; 30 wtr	....	.....	½ mi sw extension. 1 offset comp as prod well; several others drilling on locations.
White	Herald	Luttrell's Wm. Questell 1, ne ne nw 36-6s-9e	6-26-45	8-21-45	2308	2296-2308	Tar Springs sd; Miss	P 30	....	.....	1½ mi w nearest prod and separated fr it by 2 dry holes. In area of spotty prod.
White	Herald	Gilpen's S. V. Bayley 1, nw sw ne 3-7s-9e	7- 6-45	8- 7-45	2702	2686-2702	Cypress sd; Miss	P 35, 1½ wtr	....	.....	½ mi extension to pool.
		INDIANA—New Oil Field									
Posey	Crunk	Walter Duncan's Weinschien 1, ne ne sw 16-7s-12w	.....	8- -45	2712	2705-2709	McClosky li; Miss	P 91	....	.....	.....
		KANSAS—New Oil Fields									
Barton	Unnamed	Black-Marshall Oil Co.'s Ney 1, ne ne se 8-16s-11w, 1 mi n Feltes pool	.....	8- 4-45	3296	3295-3296	Arbuckle li; Cam	P 253	....	Str, trp; dr	Good recovery expected; may connect with Feltes pool.
Ellis	Unnamed	El Dorado Ref. Co.'s Kingsley 1, se ne se 34-13s-20w, 5 mi se Ellis	.....	8- 7-45	3844	3828-3844	Arbuckle li; Cam.	P 500	....	Str, trp; dr	Good strike; Arbuckle li very porous; good recovery expected.
Ness	Unnamed	Chalmette Pet. Co.'s Bowman 1, nw nw ne 31-19s-25w, 6 mi s Aldrich pool	.....	8-17-45	4576	4553-4555	Mississippian li; Miss	Sw 500	....	Ant; sub	Important; Lime horizon porous; recovery est 8000 bbls per acre.
Pawnee	Unnamed	J. M. Huber Corp.'s Katchelman 1, nw nw sw 34-22s-16w, 6 mi sw Zook pool	.....	8-19-45	4064	4059-4064	Arbuckle li; Cam	Sw 96	....	Str, trp; dr	Undetermined.
Pawnee	Unnamed	Skelly Oil Co.'s Benson 1, nw nw nw 30-23s-15w, 3 mi nw Macksville pool	.....	8-27-45	4156	3798-3807	Lansing li; Penn	Sw 498	....	Ant; seis, sub	Fairly important; good shows in Arbuckle li; Lansing shows fair porosity.
Phillips	Unnamed	Derby Oil Co.'s DeMuth 1, ne sw ne 22-5s-20w, 5 mi s Logan	.....	8- 2-45	3568	3541-3568	Arbuckle li; Cam	F 120	39	Str, trp; dr	May be extension to Hansen pool to prove up abt 600 acres.
Sedgwick	Unnamed	British-American Oil Prod. Co.'s Petrie 2, nw sw sw 36-26s-1w, 2 mi w Wichita	.....	8-31-45	3395	3387-3392	Simpson sd; Ord	P 417	44	Ant; seis, sub	Important; expected to start drilling campaign in area.
Sedgwick	Unnamed	Geo. Fuller's Ternes Estate 1, nwc sw 22-27s-1w, 2½ mi w Wichita	.....	8-25-45	2828	2817-2828	Lansing li: Penn	P 50, 5 wtr	38	Ant; dr	Not very important; structure appears small.
		KANSAS—New Gas Field									
Finney	Unnamed	Atlantic Ref. Co.'s Wright 1, se nw nw 33-21s-34w, 2 mi w Nunn pool	.....	8- 7-45	4915	2600-2618	Krider sd; Perm	F 5 mln	....	Ant; seis	Proves gas prod w of Nunn pool; structure may cover 1½ sections.
		KANSAS—Oil Field Extension									
Reno	Zenith	Phil-Han Oil Co.'s Johnson Estate 1, sw se sw 30-23s-10w, ½ mi s Zenith pool	.....	8-28-45	3714	3710-3714	Viola li; Ord	F 200	....	Ant; dr	Proves abt 300 acres s of Zenith pool.
		KENTUCKY—New Oil Field									
Todd	Elkton	Hobson-Putman's Stinson 1, 13-D-29	.....	8- -45	1410	1389-1392	Devonian li; Dev	P 4, 10 wtr	....	.....	.....
		SOUTH LOUISIANA—New Oil Field									
St. Mary	Bayou Carlin	Humble's Miami Corp. 1-H, start USCGS Station "Twin" go s 9707.5 th e 8774.2 to lcn 660 s 660 e of nwc T-16s-8e.	5-30-45	7-31-45	11919	11600-11623	Miocene sd; Mio	F 264; 3/4"	34.8	Flt; seis, sub	Important discovery. Humble owns most of acreage. 2nd test started.
		SOUTH LOUISIANA—New Oil Pay									
Plaquemines	Venice	Tide Water's Manhattan Ld. & Fruit Co. 19, 2340 s 440 w of nec 26-21s-30e.	1-10-45	7-14-45	9852	7960-7980	Miocene sd; Mio	F 173; 1/8"	31.9	D; rfr	Another sand in multiple-sand pool.
		MICHIGAN—New Oil Fields									
Allegan	N. Allegan	C. W. & Spencer Cook's Boyer 1, sw se sw 32-3n-13w, 2 mi sw S Monterrey pool	6-30-45	8-11-45	1480	1475-1478	Traverse li; Dev	P 60	....	.....	Small pool.
Clare	N. Hatton	Pure Oil Co.'s Powell 1, N½ sw nw 7-18n-4w, 3 mi n Hatton fld	1- 2-45	8- 3-45	4348	4223-4225	Dundee dolo; Dev	P 50, trc wtr	....	Ant; geol	Small pool.
Genesee	Forest	H. H. Heinig's Elliott 1, w½ nw se 12-9n-8e, 5 mi e Ottisville pool	6-14-45	8- 4-45	1506	1502-1506	Berea sd; Miss	P 8, trc wtr	....	Ant; geol	Small pool.
Gratiot	Elba	A. E. William's Cook 1, sw se sw 14-9n-1w, 2 mi se Ashley gas fld	6-30-45	8-14-45	2438	2436-2438	Traverse li; Dev	Sw 60, 0.018 mln	42	Ant; geol	.....
Osceola	N. Lincoln	Lupher Drilling Co.'s Kessinger 1	6- 8-45	8- 9-45	2948	2945-2948	Traverse li; Dev	F 500, 5% wtr	....	Ant; geol	Well cut wtr up to 20% after 3 days. Geology indicates medium size fld.
		MICHIGAN—New Gas Pay									
Clare	Hatton	W. C. Taggart's Sanford 2	8- 3-45	8-19-45	1656	1650-1656	Michigan Stray sd & li; Miss	F 10.35 mln	....	Ant; geol	.....
		OHIO—New Gas Field									
Mahoning		Ohio Oil Co.'s D. B. McCuen 1, sec 11, Goshen twp	.....	7-24-45	3636	3608-3626	Oriskany sd; Dev	F 3.98 mln	....	.....	Located 8 mi ne Columbiana County Oriskany pool.
		OHIO—New Oil Pay									
Holmes	Big Prairie	Ohio Fuel Oil Co.'s M. V. Miley 2, sec 33 Ripley twp	.....	7-22-45	3270	3228-3251	Clinton sd; Sil	F 60	....	.....	½ mi extension to Big Prairie gas pool.
		OHIO—Gas Field Extension									
Guernsey	Wheeling	Ohio Fuel Oil Co.'s W. F. Worthing 1, sec 23 Wheeling twp	.....	8-24-45	3334	3312-3334	Oriskany sd; Dev	F 1.91 mln	....	.....	Extends pool 1 mi west.
		OKLAHOMA—New Oil Fields									
Cleveland	Unnamed	O. G. Harp's Matheson 1, ne nw ne 19-10n-2w, 3 mi e Moore	.....	8-21-45	7624	7568-7615	Bartlesville sd; Penn	P 60	39	Str, trp; dr	Undetermined.
Kingfisher	Unnamed	Phillips Pet. Co.'s Jirick 1, csw sw 26-16n-5w, 2½ mi nw Cashion	.....	8-27-45	7390	7121-7150	Hunton li; Dev	F 200	....	Str, trp; dr	Important new Hunton li pool alg W. Edmond trend.
McClain	N. Lindsay	Cities Service's Lawson 1, csw nw 22-5n-4w, abt 4 mi n Lindsay	.....	8- 7-45	10995	10950-10990	Simpson sd; Ord	F 1284, 8 mln; 1"	44.7	Ant; seis, sub	Deepest prod in Oklahoma; important Anadarko Basin strike; operator controls 5800 acres.
Noble	S. Polo	Magnolia's Wollard 1, sw sw sw 34-22n-2w, abt 1 mi se old Polo pool	.....	8- 2-45	4688	4621-4688	Bartlesville sd; Penn	F 275	....	Ant; sub, dr	Bartlesville sd well saturated, porous; looks like good strike; may cover abt a sect.
Oklahoma	N.E. Jones	Stanolind's Bednar 1, nw nw nw 23-13n-1e, 6 mi e Jones	.....	8-15-45	5879	4637-4645	Cleveland sd; Penn	P 35, 35 wtr	....	Lent sd; sub	Pinchoff fr Jones pool; appears small.

McClain	N. Lindsay	Cities Service's Lawson 1, csw nw 22-5n-4w, abt 4 mi n Lindsay		8- 7-45	10995	10950–10990	Simpson sd; Ord	F 1284, 8 mln; 1"	44.7	Ant; seis, sub	Deepest prod in Oklahoma; important Anadarko Basin strike; operator controls 5800 acres.
Noble	S. Polo	Magnolia's Wollard 1, sw sw sw 34-22n-2w, abt 1 mi se old Polo pool		8- 2-45	4688	4621–4688	Bartlesville sd; Penn	F 275	....	Ant; sub, dr	Bartlesville sd well saturated, porous; looks like good strike; may cover abt a sect.
Oklahoma	N.E. Jones	Stanolind's Bednar 1, nw nw nw 23-13n-1e, 6 mi e Jones		8-15-45	5879	4637–4645	Cleveland sd; Penn	P 35, 35 wtr	....	Lent sd; sub	Pinchoff fr Jones pool; appears small.
Oklahoma	Unnamed	Ace Gutowsky's Crum 1, nw nw se 24-14n-3w, 2 mi ne Edmond		8-13-45	6945	5720–5731	Cleveland sd; Penn	P 75	40	Ant; sub, dr	May cover small area only.
Pontotoc	Unnamed	Ashland Oil & Ref. Co.'s Hales 1, ne ne nw 11-4n-7e, 8½ mi ne Ada		8-19-45	2062	2056–2062	Gilcrease sd; Penn	P 50	....	Ant; sub	Undetermined; appears sml; may cover ¼ sect.
Pottawamie	Unnamed	Charles Jenkins' Goodnight 1, se sw se 33-6n-3w, in Asher-Wanette area.		8-28-45	2869	2858–2869	Layton sd; Penn	P 25	....	Ant; dr	Looks like small strike.
		OKLAHOMA—New Distillate Field									
Stephens	Unnamed	Gulf's Briscoe Estate 1, csw nw 36-2n-8w, 4½ mi se Marlow		8-24-45	8104	7732–7774	Pennsylvanian sd; Penn	F 3000 dis, 15 mln; ¾"	....	Ant; geop, sub	Important new gas-distillate ar alg nw-se trend; possibly large structure.
		OKLAHOMA—New Gas Fields									
Hughes	Unnamed	Deep Rock Oil Corp.'s Strickland 2, sw ne ne 19-7n-10e, 2 mi nw Horns Corner pool.		8- 7-45	3957	3825–3837	Cromwell sd; Penn	F 5 mln	....	Ant; seis, sub	Undetermined.
McIntosh	Unnamed	Swick-Sherod-Apperson's Well 1, ne se sw 9-9n-14e, 3 mi ne Raiford		8-25-45	2723	2709–2723	Gilcrease sd; Penn	F 14.2 mln	....	Ant; seis, dr	Fairly important; structure may cover 600 acres.
Okfuskee	Unnamed	Amerada Pet. Corp.'s Conrad 1, se ne ne 16-10n-10e, abt 2½ mi se Okemah pl.		8-22-45	4778	3291–3408	Cromwell sd; Penn	F 10 mln	....	Ant; seis, dr	Fair; structure may cover 400 acres.
Pittsburg	Unnamed	Public Service Co. of Okla.'s Travis 1, nwc 5-7n-14e, 12 mi nw McAlester		8-27-45	2078	2072–2078	Pennsylvanian sd; Penn	F 10 mln	....	Ant; seis	Looks like good gas reserve in new area where no gas or oil prod has been developed.
		OKLAHOMA—New Oil Pay									
Lincoln	W. Davenport	L. B. Jackson's Mears 1, ne nw nw 8-14n-5e, in W. Davenport pool		8- 2-45	3635	2766–2793	Cleveland sd; Penn	F 100, 0.5 mln	44	Ant; dr	Gives W. Davenport new horizon; Cleveland sd porosity; lots of pressure.
		OKLAHOMA—Oil Field Extension									
Oklahoma	Bethany	Phillips Pet. Co.'s Airport 1, ene ne 8-12n-4w, 1 mi s Bethany pool		8-21-45	7253	7220–7233	Hunton li; Dev	F 546; 11/32"	....	Ant; seis, sub	Important extension; opens up 640 acres in Bethany area.
		LOWER TEXAS GULF COAST—New Oil Field									
Live Oak	Hinnant	Wright-Christie's Mrs. M. A. Hinnant 1, 660 fr nw&swk 80-ac lse, and Ed Quinn sur.	4-13-45	7-11-45	6518	5751–5783	Cockfield-Yegua sd; Eoc	F 78.3; 7/64"	41.6	Flt; geol, seis	1st well indicates important strike. 2 new locations point to rapid development.
		LOWER TEXAS GULF COAST—New Gas Field									
San Patricio	Unnamed	Republic Nat. Gas Co.'s J. B. Hardwick 1, 330 fr swl 120 fr sel blk 48 Welder & Odem sbdn blk 48, 465-ac lse.	2- 8-45	3-25-45	7010	6885–6900	Frio sd; Olig	F 20, 9.4 mln; ¼"	....	Flt; seis	Shut in gas well. New markets for gas will determine development of pool.
		UPPER TEXAS GULF COAST—New Oil Field									
Liberty	Unnamed	Glenn H. McCarthy-Sun's A. D. Blanke 1-A, 1150 fr nl 400 fr el 115.5-ac lse, 2500 n of sl Levi Barrows sur, 300 s of jnkd hole 1.	6-21-45	8- 7-45	8550	8497–8505	Frio sd; Olig	F 17, 3 mln; 3/16"	44.6	SD; rfl, seis	North of Old Hankamer fld. Shut in.
		UPPER TEXAS GULF COAST—New Distillate Fields									
Harris	Unnamed	Lenoir M. Josey's Lenoir Josey 1-A, 1250 n 330 w of sec sect 17 H&TC sur, 640-ac lse, Cypress area, 1½ mi n Joyce Richardson fld.	5-18-45	7- 4-45	7572	6955–6965	Yegua sd; Olig	F 17 per mln, 31 mln. ¼"	....	Seis	Development will be slow. Shut in gas well.
Jefferson	Gilbert Ranch	Sun's Gilbert Est. 1, 6682.3 fr sl 2316.7 fr wl John Ricord sur, 2576 n of 7580 ft dry hole, 1432.8-ac lse.	3-25-45	6- -45	8996	8675–8695	Frio sd; Olig	F cond; gas	....	Flt; seis	Prospects for immediate development slight. No final gauge made. Shut in.
		UPPER TEXAS GULF COAST—New Gas Field									
Wharton	Crescent	Texowell Service & Machine Co.'s Sam Hamberger 1-A, 660 fr s&wl sect 65 WCRR sur, 580-ac lse.		7-10-45	4511	4450–4460	Frio sd; Olig	F 0.75 mln; 1/8"	....	Geol	Unimportant; shut in gas well.
		UPPER TEXAS GULF COAST—New Oil Pay									
Matagorda	E. Bay City	Stanolind's Eliz. L. Barth 1, 1000 fr el 2250 fr nl I&GN sur, 2640 e nely fr disc well, 180-ac lse.	4-17-45	7-30-45	10493	10424–10430	Lower Frio sd; Olig	F 40.46; 7/64"	30.5	Flt; seis	1st oil prod in fld. Oil sd deeper than gas-condensate sd in disc well.
		UPPER TEXAS GULF COAST—Oil Field Extension									
Wharton	Boling	Union Oil's E. & L. M. R. Hawes Est. 1, 2350 nly alg ely/1 97-ac lse, 304 wly at ra on n flk, 3000 ely at ra fr wly/1 John Huff sur.	7-20-45	8-20-45	4693	4550–4575	Marginulina sd; Olig	F 155.5; 5/16"	25.9	SD; sub	1st oil prod on n flank.
		NORTH TEXAS—New Oil Fields									
Cooke	Almon	Fred Snuggs-McElreath-Suggett & Neal Bros.' L. M. Almon-Sun 1, 330 ft snl, 1075 ft ewl J. M. Randolph sur A-868, 2 mi n Anderson-Kerr fld, nearest.	7-16-45	8-20-45	2907	2898–2907	Strawn sd; Penn	P&F 87	33	Ant; geop	
Jack		Hanlon-Buchanan, Inc.'s W. R. Mathis 1, 467 ft nsl, 1040 ft wel of G. W. Davis sur A-187, 1⅝ mi w of Matlock deep area.		8-12-45	4770	4758–4764	Bend cong; Penn	F 397; 1"	42	Ant; geol	Not important as 6-ft conglomerate pay zone at this depth not adequate.
Jack	Joplin	Roeser-Pendleton, Inc.-F. Kirk Johnson's D. C. McAnnaly 1660 ft out sec sect 18, blk 2, Henderson CSL sur, 1½ mi e by n shutin wildcat gasser, nearest prod.	7- 1-45	8-11-45	4446	4430–4446	Bend li; Penn	F 254; ¾"	41.8	Ant; geol	
		NORTH TEXAS—New Oil Pay									
Wilbarger	E. Harrold	National Asso. Pet. Co.'s Sam Kelly 1-B, se se se H&TC Ry, 36, blk 13, nw offset to 4900-ft Ellenburger disc.	7-23-45	8-23-45	3679	3649–3679	Canyon (Basal) li; Penn	F 300; ¾"	....	Ant; geol	This upper pay expected to embrace greater area than underlying Ellenburger disc zone.
		WEST CENTRAL TEXAS—New Oil Pay									
Jones	Cooper	S. B. Roberts & Hunter's O. J. Cooper 2, 330 ft wel, 1216 ft nsl sw¼ T&P Ry. 29, blk 15, n by e offset to Swastika disc at 2312-32 ft.	7-21-45	8-11-45	2353	1989–2004	Filppen li; Penn	F 1336; 2"	37	Ant; geol	Potential based on brief gauge. Dual comp will follow.
		WEST TEXAS—New Oil Fields									
Andrews		Magnolia-Humble's E. P. Cowden 1, c nw se PSL 7, blk A-55, 8¼ mi w by s Ratliff fld.	4-19-45	8-23-45	8051	7900–7960	Devonian li-chert; Dev	F 244; ⅜"	38.2	Ant; geol, geop	Base of Permian correlates 246 ft high to 8012-ft Permian failure ⅝ mi sw, indicating steep struct, with prod area speculative. Possibly 100-ft zone Devonian gas, or oil-gas pay abv perfs. Est crude yld varies fr 12,000 to 18,000 bbls per acre. Considered good prospect for Ellenburger prod.
Pecos		R. G. Patillo's (was Sun's) T. Davis 1, 1050 ft wel, 2400 ft nsl H&GN Ry. 105, blk 8.	4-30-45	8-19-45	1568	1559–1568	Yates li; Perm	F 70, 1130 wtr; 4"	21.4	Ant; geol	Not important, due to predominance of wtr and nearby failures.
		WEST TEXAS—New Oil Pay									
Ward	Monahans	Shell's Sealy-Smith 6, c nw se G&MMB&A 37, blk A, 2820 ft n by w of Ellenburger prod.	1-25-45	8-11-45	8058	4730–5020	Holt li; Perm	F 481; ½"	37	Ant; geol	3rd and shallowest oil pay for 6-well fld. New pay probably will be restricted to flk to struct, which has sharp dip to n.
		WEST TEXAS—Oil Field Extensions									
Hockley	Levelland	Texas Co.'s W. T. Coble 1-B, 580 ft out of nwc e½ Labor 19, Lge 67, Hardeman CSL sur, 1⅝ mi w prod.	5-22-45	8-22-45	4870	4765–4870	San Andres li; Perm	P 21	29	Ant; geol	Not profitable producer.
Martin	Mabee	Mabee Oil & Gas Co.'s J. E. Mabee 1-14, c sw sw G&MMB&A 14, blk 39, T-2-N, 1¼ mi ne outpost.	5-27-45	8- 7-45	4712	4650–4712	San Andres li; Perm	P 166	31.8	Ant; geol	Probably will result in drilling of abt 20 wells.
Pecos	Ft. Stockton	Texas Co.'s W. A. Martin 1, c sw ne T&StL Ry Co. 14, blk 146, 1⅞ mi se outpost.	6-11-45	8-31-45	2955	2873–2955	Yates sd; Perm	F 52; 7/64"	29.6	Ant; geol	Intermediate acreage will be drilled and is considered proved.

[1] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale; ser, serpentine; cgl, conglomerate. Ages of formations abbreviated thus: Pleis, Pleistocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre., Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian.
[2] Barrels of oil per day (24 hr. rate), flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches.
[3] Type structure abbreviated as follows: Ant, Anticline; D, Dome; Fld, Fold or Folded; Flt, Fault or Faulted; M, Monocline; N, Nose; SD Salt Dome; Str, trp, Statrigraphic trap; Syn, Syncline; Ter, Terrace.
[4] Method of discovery abbreviated as follows: cd, core drilling; dr, drilling; geol, geology; geop, geophysics; grv, gravity meter; ran dr, random drilling; seis seismograph; sub, subsurface geology; sur, surface geology.

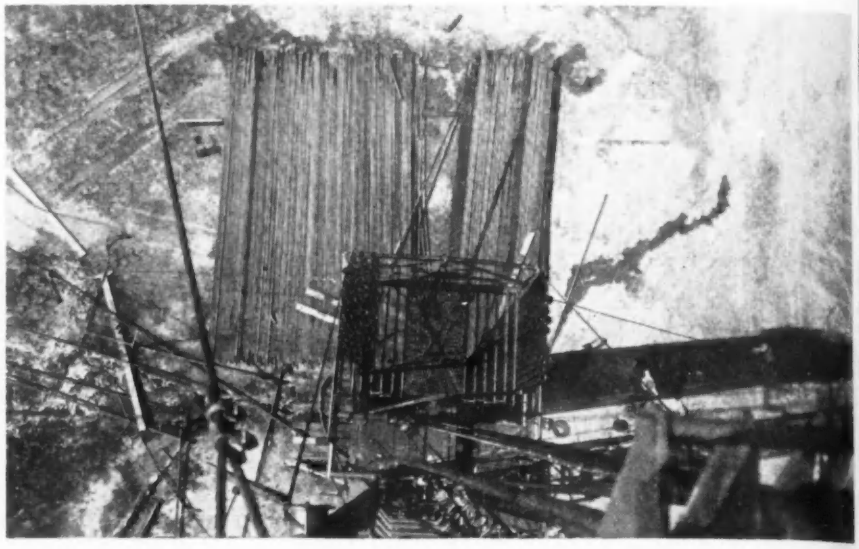
PRODUCTION HINTS

Split Racking to Provide Walkway Without Using Tubing Prevents Distorted Joints

WELL SERVICING

When laying down rods and tubing from wells producing from depths of 6500 feet or more, one servicing company foreman finds it pays dividends in better protection of both rods and pipe if they be strung out on supports with a clear walkway kept open between them. This open space serves to take all the walking traffic of handling the lower end of the individual joints of rod and pipe, and not only protects the material already placed from possible damage through kinking, but also insures safe and paraffin-free footing for the crew.

The re-running of the tubing and rods involves slightly more work than if the plan of close racking were followed, but the unit lengths may be rolled to the center by the man at the rack during the time the elevators are hoisting the previous unit to position for stabbing and running into the hole.



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Rubber Bearing in Counterweight Reduces Sway and Noise

BEAM PUMPING

Concrete counterweights, in these days of shortages in iron and steel, are becoming "regular" equipment on many pumping installations where clearance provisions were originally designed for the more compact units of conventional design.

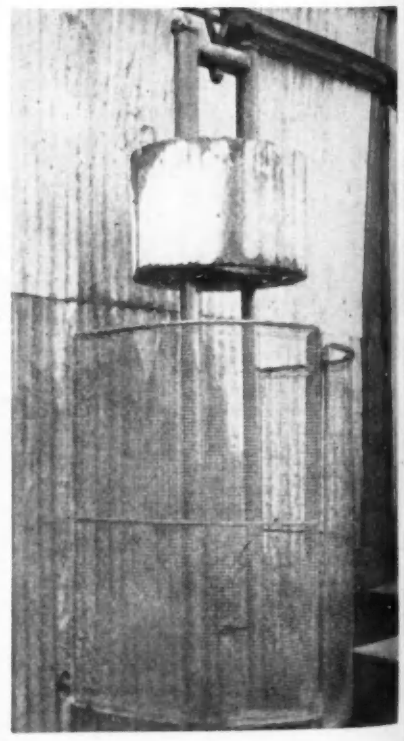
On one unit where concrete was used, the weight was cast in a cylindrical mold, with sufficient capacity to give the desired loading when slung from the end of the beam. In the weight, instead of the usual pipe slides or bearings for service over the pipe rails on which the weight is operated to keep down swaying, were placed rubber bearings, their interior diameter being ¼-inch greater than the nominal O.D. of the pipe.

These bearings were salvage, being made up from old drill pipe protectors which, for one reason or another, had had been cut from pipe before being worn out. They were shaped by being wired onto a mandrel, made up from a cardboard tube and paper lagging to the desired diameter, and positioned in the form for enclosure by the concrete as poured.

After pouring, the cardboard center was removed, any fins of concrete which formed at the vertical seam in the rubber being cut back to give plenty of clearance, and the unit suspended over the guide-rail pipes.

The rubber "bearing" ran quietly, in marked contrast to the squeeks and groans from steel-to-steel contact, and after two years' operation showed no appreciable enlargement of the opening through it.

It was hard, at first, to prevent the pumper from applying grease to the slide after the usual manner when a metal-to-metal contact was obtained; but a demonstration of the effective operation obtained when the contact was simply wetted with water from the cooling system overflow quickly proved that the contact between guide and rubber bearing was most easily maintained at desired clearance when no attempt was made to provide lubricant. Such sand and grit as, wind-borne, reached the bearing area, tended to cut the pipe rather than abrade the rubber, but soon cleared up by being worked to the bottom of the opening and thus freed.



PRODUCTION HINTS

Reversing Flare Head Prevents Throwing of Blazing Slugs

FLARE OPERATION

Where waste gas must be flared, in those fields having no outlet to gas trunk lines or producing gas so contaminated as to be unfit for commercial use, the pit type of flare is frequently more effective and less troublesome than the type employing an elevated outlet. One producing company utilizing pits has developed a flare head which effectively snubs possibly slugging of liquids through the unit, with consequent hazard of fires caused by scattered drops of burning liquid.

The gas is led to the pit through a horizontal main, tee-equipped, with the side outlet set vertically, and carrying a short nipple. Over this nipple is fitted a spider, carrying a larger nipple which fits over the riser with an annular space separating them. Over both nipples is fitted a curved deflector head, supported on projections from the outer nipple so as to leave space between the spherical cap and the walls of the pipe.

Gas flowing through the line reaches the cap, and is deflected down through the annular space between the lines, being directed against the ground which, after the flare is once started, remains hot enough to re-ignite the flow in case of momentary break in the stream.

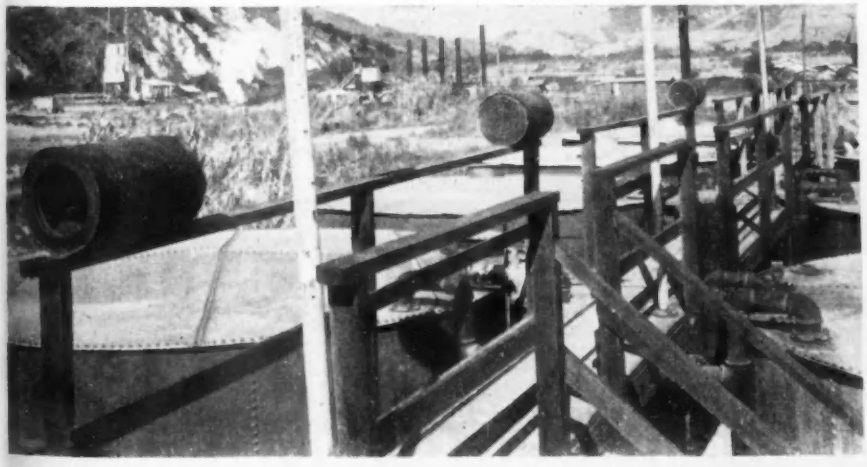
This type of head prevents burning away or melting of the inner or conducting line, as it is shielded by the cap and outer shell, and there is thus no chance for the shape of the head to change or a break to occur which might result in a directed jet — with possible fire hazard.

Containers for Wiping Rags Aid in Keeping Lease Clean

LEASE CARE

A systematic method of caring for wiping rags around the tank battery will pay dividends and provide an inexpensive form of insurance against the possibility of fire. One company safeguards field tank batteries by installing along the catwalk guard railings a number of light steel drums laid horizontally and containing wiping rags for pumpers and gaugers.

The walkway extends down the center of the row of tanks, and each container is mounted so it will be handy for each lateral pair of tanks. Having rags within arm's-reach of the point where he uses them encourages the employe to take care that the rags are replaced in the container. Such care will go far toward maintaining neatness about the battery and preventing possible fires which might be caused by spontaneous combustion. Mounting the light barrels on the top of railings, putting them up where more air is in circulation, also is an improvement over the common means of storing rags when they are kept near the base of the battery.



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Shale Shaker Actuates Chemical Mud Feeder

Side view showing how shale shaker is connected to feed drum, to provide constant chemical feed.

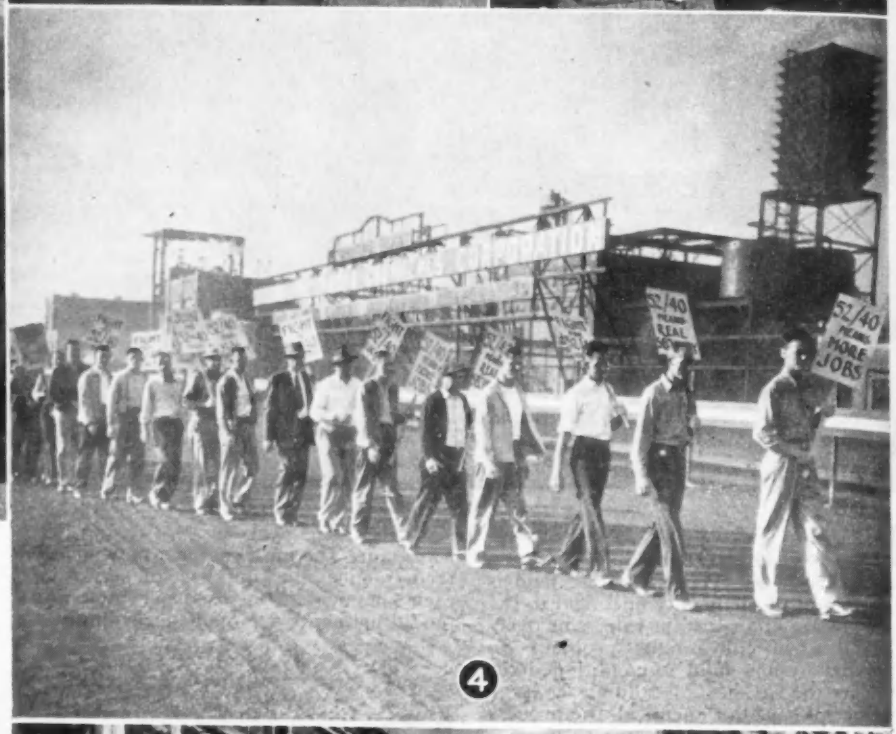
BY UTILIZING available power, a contractor in the West Edmond field is able to add mechanically chemical to the mud stream at a constant rate, thus overcoming a difficult mixing problem. In cases where the mud is conditioned for specific formations by adding a large number of sacks of chemical, the process is carried out much the same as in mixing cement. However, in order to maintain all the mud at the required specifications, a small amount of chemical must be added continuously.

To make a feeder, a 50-gallon drum was placed over the mud spillway between the shale shaker and the pits. Into the bottom of the drum was welded a two-inch nipple with a slot to admit a small piece of tin for a valve disc. A rod attached to the disc was run out and attached to a turnbuckle by means of a wire line clamp.

The photographs show the shale shaker, feed drum and connecting links. A rather large hole was cut into the frame of the shale shaker with a welding torch. A bolt was run through this hole, then through the eye of a turnbuckle. By adjusting a nut on the bolt, the proper amount of "jiggling" can be applied to the drum.

Once the proper adjustments are made, the chemical comes out in a fine, steady stream and the only attention necessary is to refill the drum when necessary. This device removes the human element to a large extent from mud treatment, and less trouble has been encountered since the installation was made. The mud engineer now merely recommends the number of sacks of each chemical to be used per tour, and the adjustments are made accordingly.

View showing mounting of drum over mud spillway. A small stream of makeup water, at lower left helps disperse the chemical in the mud.



Strike Vise Grips U. S. Refineries

1. Violet Justine, left, and Artis Anderson, members of the CIO United Oil Workers union, hand pamphlets to tank wagon driver Bruno Drangmeister at Whiting, Indiana, asking him to join the strike that already has shut off about 20 percent of the nation's refinery output.

2. Members of U. S. Conciliation board who met in Chicago with officials of 11 major oil companies and heads of the oil workers' union in an effort to end the strike. Left to right, A. J. Hummart, St. Louis; Justice William L. Knous, Colorado Supreme Court; and J. O. Hubbard, Houston.

3. Leaders of the oil workers' union meet informally to prepare "battle strategy," at the Chicago conference. Left to right, E. C. Conarty, secretary-treasurer; O. A. Knight, Fort Worth, president; E. Carl Mattern, vice president; and A. R. Kinstley, vice president.

4. Pickets parade with signs in front of the Carbon & Carbide Chemical Company at Whiting, Indiana, as the company's hydrocarbon chemical plant joined the strike.

5. The strike, which was threatening to empty the nation's highways of automobiles, had already clutched those on the assembly line. In Detroit, automobiles which started rolling off the lines after reconversion set in, ran into a bottleneck when workers went on strike.

—Photos by Acme.

The Outlook

The natural gas hearings before the Federal Power Commission will not continue to be as calm as those in Kansas City. Differences of opinion as to how to use it, and the competition between the labor unions of the railroad and coal industries and the natural gas industry will pop up frequently at later hearings.

* * * *

Producers of natural gas need never hope that plastics and synthetics will create a sufficient market to solve their outlet and price problems.

* * * *

If all the plastics and synthetics now being made from natural gas, refinery gases, petroleum, and coal were to be made from natural gas alone, only about 1 percent of the current gas output would be required. It is doubtful, even with substantial expansion in manufacture of plastics and synthetics, if the quantity would ever exceed 2 percent of the daily gas production.

* * * *

Consummation of the Anglo-American petroleum agreement, along lines laid down by the industry, is expected to start a movement which will remove oil from the list of international frictions; other countries are expected to adhere to the agreement in the near future, possibly at an international conference.

* * * *

Labor controversies in the oil and automobile industry, but particularly the former, are offering the first major test of the administration's policy of conciliation and mediation as a corrective of industrial conflict. Labor will fight long for peace-time wages at war-time "take home" — not hourly rate — levels.

* * * *

Military authorities are not depending entirely on the automic bomb as the weapon of future wars but are continuing research on other tools of destruction, with emphasis upon the incendiary oil bomb; chemical officers predict that the next war will bring flame implements which will make the incendiary raids on Japan little more than bonfires.

* * * *

Congress is expected to insist that the score of agencies set up during the war to deal with matters other than those handled by the WPB, OPA and other major boards be liquidated by mid-1947; among the bodies which will be terminated are Petroleum Reserves Corporation, Rubber Development Corporation, U. S. Commerce Company, Rubber Reserve Company, Defense Plant Corporation and War Damage Corporation.

* * * *

Hearings by the Senate Special Petroleum Investigating Committee on postwar petroleum requirements will be followed by an investigation of the disposal of government-owned petroleum facilities, including pipe line. The hearings will be held within a month or six weeks, and RFC officials will be questioned sharply on their plans to immobilize the government-owned pipe lines before making any effort to dispose of them as going concerns.

* * * *

Government surpluses abroad will be traded to European governments in return for trade concessions which will level artificial barriers against United States products. Petroleum equipment accordingly may serve to pave the way for better treatment in some countries of American oil companies seeking to do business there.

* * * *

A recession in drilling activity is not improbable. Faced with lower incomes as a result of reduced production allowables, and with prospects of having to raise wages without being able to get more for their products, many companies will not be financially able to drill on a wide scale.

The Week's News

SIGNING of the revised Anglo-American petroleum agreement and labor difficulties were the two outstanding developments in the oil industry last week.

Anglo-American Oil Pact—With the above-board policy has contrasted sharply with the secrecy of most treaty negotiations, the text of the agreement was made public by PAW, showing the extent to which the demands of the industry, which led to the quick abandonment of the original pact, has been met. Page 64.

Oil Workers Strike—Of more immediate interest, however, because of the implied threat of an almost total tie-up of the nation's transportation should a general strike take effect in the industry, was the effort to solve the problem raised by the CIO demand for a 30 percent wage increase. In Washington, the controversy was admitted to present a major test of the administration's labor policies. Story below.

Oil Price Deterrent—Members of the industry were quick to charge that the present OPA ceilings were acting as a deterrent to any quick, satisfactory wage agreement, and members of the National Crude Oil Industry Advisory Committee were called to meet in Washington October 5 to consider the situation. Page 60.

Last PAW Demand Figures—PAW bowed out of the field of demand forecasts with an estimate that a daily crude production of 4,464,400 barrels would be required through October—a decline of 108,500 barrels from the estimated September requirement—but the estimate lost much of its force as the Texas Railroad Commission ordered a sharp cut-back in output and operations in other states began to slow down as stock piled up. Pages 60 and 64.

O'Mahoney Group Plans—The Senate Petroleum Investigating Committee is about to launch its fourth of a series of hearings on oil problems, taking up questions of world postwar requirements, with an outstanding list of industry representatives scheduled to testify. Page 61.

Big Inch Verdict Stayed—Criticism of the RFC's decision to discontinue operation of the war-built government-owned pipe lines before the end of the year brought about a reconsideration which led to suspension of the order pending a thorough investigation of the situation and the possible uses to which the lines, particularly the Big Inch, could be put in the peacetime economy. Page 62.

Alcohol Plants' Future—Objection to the RFC's action was especially loud in Congress where, too, a move is under way to halt the disposal of any of the government-owned grain alcohol plants until it can be determined whether their permanent operation would be beneficial to agriculture.

Yank Synthetics Better—German spies failed to note the significance of the techniques adopted by the synthetic rubber industry in this country and German manufacturers never had an opportunity to compare American-made tires with theirs, it was reported by a mission which studied the Nazi rubber industry.

Anti-Trust Rumblings—The Department of Justice was revealed to be interested again in the oil situation and to be considering a suggestion to the industry that it revise some of its marketing practices which give an edge to exclusive dealers. The department also is said to be hopeful that the Big Inch pipe line will be taken over by interests not connected with the industry, to be operated as a common carrier. Page 60.

The Oil Tankers' Future—Preliminary decisions as to future employment of the great war-built American tanker fleet may come out of sessions of the United Maritime executive board this week. Page 64.

FPC Gas Hearings—The first of FPC's hearings on natural gas was closed last week at Kansas City as witnesses urged an unrestricted market. Next sessions are at Oklahoma City. Page 61.

Continental Shelf Land Claim—President Truman in a proclamation extended U. S. jurisdiction over all underwater lands of the continental shelf. Page 60.

Roumanian Oil Situation—American oil equipment is badly needed in Roumania, it has been revealed by Standard Oil Company (New Jersey) representatives who finally have been admitted to that country and made a survey. Page 63.

Conciliation Service Makes Effort To Settle Tightening Oil Strike

A strike-bound oil refining industry has entered its third week of unsettledness with attempts still being made by both industry and union officials to bring the situation out of chaos.

Striking laborers had late last week shut down at least 12 refineries in the Houston-Beaumont-Port Arthur-Texas City area on the Upper Texas Coast and the Corpus Christi area of Lower Texas Coast which have a total refining capacity of about 850,000 barrels daily or approximately 80 percent of the total capacity of the Texas Coast. In addition, there are several plants in the midwest shutdown as a result of strikes to bring the nation's total idle refining capacity to about 1 million barrels daily or almost 25 percent of the normal United States refining capacity.

The CIO Oil Workers International Union already has more than 35,000 on strike in 8 states and has authorized a nationwide strike, which might involve 250,000 oil workers, if the conciliation meetings between industry and union officials fail to bring a settlement.

In an effort to prevent strikes from causing Texas crude to run to storage, the Texas Railroad Commission issued an emergency order reducing Texas' daily allowable 403,000 barrels daily from a previously issued order which had cut the state's daily oil flow 207,000 barrels. The net allowable for October 1 was thus 1,330,957 barrels.

The emergency order was issued by state officials after some pipe lines had refused to take the oil from the leases because there was no place to run the oil. The new emergency order is effective October 1.

The industry-union conference in Chicago at first appeared to be deadlocked but Edgar L. Warren, chief of the reorganized United States Conciliation Service, urged it keep alive.

At the close of the week the management-labor conference was switched to Washington by Secretary of Labor Lewis Schwellenbach, who declared that not enough progress had been made at Chicago "considering the urgency of the situation."

Schwellenbach disclosed that the issue, originally a CIO demand for a 30 percent wage increase, had shifted in part to a question between the government and the companies over industry-wide bargaining. He brought the conference to Washington, he said, so he personally could assure the companies the government was not attempting to force industry-wide agreements.

Failure to settle the controversy quickly will bring an immediate nationwide gasoline crisis, he said, explaining that the Army and Navy reported they will be out of supplies by the end of this week. In other quarters, however, it was said the military had enough to get along on for possibly 3 weeks.

In Washington, officials indicated that if the negotiations between the companies and the union failed to reach a satisfactory conclusion quickly the government might use its seizure powers to get the refineries back into production, using the machinery of the War Labor Disputes act.

PAW, over the signature of Adminis-

trator Ickes, requested all of the companies to make every effort to bring about a resumption of production and warned that the Army and Navy cannot afford the losses in military products which are resulting from work stoppage.

Replies from several companies showed that while there was no controversy in their plants, production in some midwest refineries had been halted as a result of picketing by the CIO.

In a telegram sent to Justice William L. Knous of the Colorado Supreme Court Schwellenbach pointed out that the confidence of the public in free collective bargaining would depend on the success of the meetings.

The conference was acknowledged in Washington to provide the first major test of the administration's wage policy as embodied in the recent reorganization of the Department of Labor and strengthening of the conciliation service.

Schwellenbach emphasized that oil and gasoline reserves would be quickly depleted and that a breakdown of military and civilian transportation systems might follow quickly on the heels of a further tie-up of production.

"Such a breakdown would strike at the reconversion program and would prevent the bringing home and discharge of the men in the armed services," he declared.

Picketing of bulk plants owned by companies whose refineries were strike-bound has created a civilian gasoline shortage especially in the immediate vicinity of the idle plants. Filling stations were still open but many of them had empty gasoline tanks. The only business was lubricating oil, washing and greasing and other services.

Also idle on the Texas coast were plants of industries related to petroleum such as synthetic rubber, chemical, and styrene planes, and pipe lines.

Oil operators, both major company and independents, said that a prolonged strike would curtail the drilling of new wells, especially those in proven areas where pipe lines were refusing to take the oil for lack of storage facilities.

Plants on the Texas coast shutdown by strikes included those of Gulf, Magnolia, Pure, Texas, American Liberty, Pan American, Republic, Shell, Sinclair and Crown Central. Reports also said that The Atlantic Refining Company's plant was due to be closed down.

As a result of the idle plants, pipe line proration was being employed in many Texas pools including the Permian

Economic Factors Relating to Wage Increase Demands

An Editorial

THE demand of organized labor for a 30 percent wage increase in the oil, automobile, lumber and steel industries, backed by strikes of the CIO reported to involve some 400,000 persons, presents not only the industries concerned but the American public with an economic problem that commands frank examination.

Everyone favors higher wages and shorter working hours, just as everyone favors a high standard of living and two chickens in every pot, but unfortunately there are economic laws which cannot be repealed by business, labor or government.

A study by the Brookings Institution of Washington, D. C., authoritative research organization, estimates the total number of employable persons at the end of 1944 at 61,550,000, as compared with 53,300,000 in April, 1940.

Of the 61,550,000 persons employed or capable of employment, 11 million were in the armed forces and 11 million in war industries at the end of 1944. That leaves approximately 40 million persons in normal industry.

During the next year or so, the 11 million men in the armed forces must be absorbed by industry in productive work. The 11 million war workers, many of whom have been or will be displaced, also must find jobs.

These figures are important in considering the request of labor unions for a 30 percent blanket wage increase in three of the nation's major industries—oil, automobile and steel.

The union demand for 52 hours' pay for 40 hours' work appears to be an effort to obtain for the approximately 40 million now employed all the money currently available for industrial wages, leaving nothing for the reemployment of war veterans and displaced workers in war industries.

This contention is backed up by statistics of the three industries confronted with the 30 percent wage increase demand, as obtained from the 1944 annual reports of the affected companies.

In the oil industry, five companies whose refineries are now shut down had pay rolls in 1944 of $402 million and net income of $192 million. In 1941, net income was $140 million. An increase of 30 percent in wages would cost these companies $120 million, leaving very meager earnings on wartime business and virtually no earnings on the basis of the last peacetime year.

United States Steel, also confronted with a 30 percent pay increase demand, earned $60,800,000 in 1944, with a pay roll of $914 million. A 30 percent wage increase would cost $270 million, creating a $190 million deficit, although its output of steel was at an all-time peak.

General Motors in 1944 earned $171 million, with a pay roll of $465 million. The demanded wage increase would raise General Motors' labor bill by $140 million.

These statistics are simple enough. It is obvious that if the 30 percent wage increase is granted without a compensating product price advance, earnings of the three industries now negotiating with the unions on wage demands will be virtually wiped out, leaving no return on the investment and no funds with which to carry out reconversion and expansion necessary to provide more jobs. If carried to its logical conclusion, on a nation-wide basis, the 30 percent wage increase would hand to the 40 million persons now employed all the money which business and industry can pay in wages, leaving the war veterans and displaced war workers walking the streets.

There is another alternative—higher prices to offset the wage increases. If a general 30 percent wage increase should become prevalent, along with shorter hours and lower weekly production by a given number of men, industry would have to raise the price of its products to compensate for higher costs. Higher prices would unleash dreaded inflationary forces which, if they should get out of hand, could wipe out any benefit from the 30 percent wage increase in the twinkling of an eye, destroy savings, property values, and any semblance of stability on the whole economic front.

Business and industry are confronted at this moment with two stupendous tasks: 1, providing permanent peacetime jobs for some 20 million persons and 2, converting plant facilities from war to peace production. To add to the burden a demand for a 30 percent increase in wages is like tying weights on the feet of a 100-yard dash man and then expecting him to go into a track meet and win the race.

Basin of West Texas. The emergency order of the rail commission was intended to relieve this situation.

Meantime, inland refineries in Texas, Oklahoma and Kansas have not been affected by the strike. Tulsa reports say that unless strike-bound areas make unprecedented demands upon their stocks, refiners in the Tulsa area will have enough supplies for 30 days in the event the refinery strike extends into the Oklahoma district. Tulsa is served by 3 refineries and workers at these plants were marking time following a strike vote.

The strikes which had already separated more than 22,000 Texas oil workers from their jobs, threatened to spread into the Permian Basin area of West Texas. Union leaders said plans were taking shape for oil field workers to enter the wage dispute which has closed the refineries. Such a strike would involve approximately 5000 workers and affect about 14,000 oil and gas wells.

Anti-Trust Action May Involve Use of Big Inch

Department of Justice officials reportedly are planning to give the oil industry an opportunity to revise its business practices or explain their policies in court in a revival of the all-industry suit filed in the fall of 1940.

The department is said to be aiming at two objectives, of which the revision of selling policies is one and the establishment of the Big-Inch pipe line as a common carrier in the hands of owners not otherwise connected with the oil industry is the other.

The three major points which department officials believe need correction are exclusive dealing, discriminatory pricing in favor of exclusive outlets, and full line forcing. They believe the companies are vulnerable at these points; in fact, the same three issues have been pressed successfully in the courts in suits against the motion picture industry.

Arguments for revision of these practices are being prepared in the department, possibly with a view to calling representatives of the industry in for discussion of a consent-decree settlement. In such an event, refusal of the industry to agree would be followed by revival of the suit.

The department also is said to be interested in the Big-Inch pipe line, seeing in its operation as a real common carrier.

Officials point out that some of the privately owned lines are theoretically common carriers, but actually independents find it impossible to get space for the movement of their product because of minimum-tender or other restrictions.

They say that if the Big-Inch were acquired by a group of non-oil interests and operated purely as a common carrier transportation line, it would solve some problems. The emphasis placed upon ownership by non-industry interests, at the same time, indicates that the department would look upon acquisition of the line by any oil company or group of companies with suspicion.

National Advisory Committee to Meet For Discussion of Prices with OPA

Plans of Secretary of Commerce Henry A. Wallace to make use of industry advisory committees in the formulation of postwar programs brought from the House Small Business Committee last week pointed criticism of the failure of Price Administrator Chester Bowles to invite industry advice in the formulation of price policies.

Reporting to Committee Chairman Wright Patman of Texas, Wallace said: "OPA refused to supply its over-all findings to the advisory committee for discussion, saying that the survey was inadequate. The Small Business Committee has protested the OPA refusal on the ground that surveys in other lines have been made from smaller segments of an industry and further that an industry advisory committee is at least entitled to know the general basis on which OPA refuses to grant price increase requests."

Members of the National Crude Oil Industry Advisory Committee appointed last January by the OPA have been called to meet in Washington October 5 to discuss the problem of crude prices and related questions.

Call for the meeting was sent out by Chairman Charles F. Roeser, to consider the situation developed by the OPA announcement that no tabulation would be made of the questionnaires sent out to the industry last spring.

OPA originally planned to send the completed questionnaires back to the senders, but decided to retain them after protests were made by the industry committee and the House Small Business Committee.

The price controls were seen as playing an important part in preventing a quick and satisfactory solution of the CIO demand for higher wages and in a letter to Reconversion Director John W. Snyder last week Senator E. H. Moore of Oklahoma urged that they be lifted immediately.

Pipe Line Proration Brings Further Cut in Texas Crude

The Texas Railroad Commission last week moved to prevent strikes from causing Texas crude to go to storage. Early in the week, an order was entered cutting Texas allowables 207,000 barrels daily for a total of $1,785,089 barrels effective October 1 but when pipe line proration appeared, a new order was entered cutting an additional 403,000 barrels daily.

"The emergency is caused by the fact that some pipe lines are taking oil, and others are refusing to take it because they have no place to run the oil," Commissioner Ernest Thompson said.

The commission had first gone through its September allowables and cut 43,186 barrels daily, which had been assigned to wells in excess of the amount they could produce. Then a horizontal cut was ordered by reducing to 12, the number of producing days for most fields with the Panhandle field still exempt from shutdown. Thus a total reduction of 661,284 barrels daily has been ordered for October, the allowable being 1,330,957 barrels, which is approximately the same as was being produced in Texas in October, 1941.

The action was termed "an emergency order for 15 days."

All Continental Shelf Land Claimed for United States

The United States on September 28 laid claim to ownership of all underwater lands of the continental shelf.

In a proclamation extending U. S. jurisdiction far beyond the traditional three-mile limit, President Truman moved to reserve for this nation deposits of oil and possibly minerals over an area of some 750,000 square miles covered by not more than 700 feet of water.

In an explanatory statement, the White House emphasized that the proclamation has no connection with the present controversy over tideland oil rights but "it is concerned solely with establishing the jurisdiction of the United States from an international standpoint."

The need for the discovery of additional resources of oil and other deposits, it was said, "made it advisable for the United States to make possible the orderly development of these resources."

Chicago Rooms to Be Prorated for API

A housing committee consisting of L. S. Wescoat, The Pure Oil Company, chairman; Sheldon Clark, Sinclair Refining Company; B. L. Majewski, Deep Rock Oil Corporation; and A. W. Peake, Standard Oil Company (Indiana), has been appointed by W. R. Boyd, Jr., president of American Petroleum Institute for the purpose of allocating hotel reservations for the November 12-15 annual meeting of API in Chicago. Proration of rooms became necessary when it was seen that the Chicago hotel situation during the period would be exceedingly tight.

Boyd asks that reservations be addressed to one's preferred hotel, pointing out that all requests would be screened by the committee.

O'Mahoney Committee to Resume

Postwar world oil requirements will be studied by the Senate Petroleum Investigating Committee headed by Senator Joseph C. O'Mahoney at a series of hearings to open October 3 with Dr. Robert E. Wilson, chairman of the board of Standard Oil Company (Indiana), and Stewart P. Coleman, of Standard Oil Company (New Jersey), as first witnesses.

An industry group will handle the presentation through witnesses to include, in addition to Wilson and Coleman, Joseph E. Pogue of Chase National Bank, J. French Robinson of American Gas Association, H. J. Struth of Texas Mid-Continent Oil and Gas Association, James V. Brown of Independent Petroleum Association of America, E. Buddruss of the Independent Natural Gas Association, Earl W. Wagy, Standard Oil Company of California; Fred Van Coverth, American Petroleum Institute; A. T. Bartlett, Shell Oil Company; E. T. Knight, Atlantic Refining Company; A. J. McIntosh, Socony-Vacuum Oil Company, and J. M. Sands, Phillips Petroleum Company.

Topics on which data is sought includes prewar and estimated postwar consumption in the United States, and new uses and applications of petroleum; estimated world requirements by countries; estimated postwar productive capacity by countries; movements of petroleum in world trade, and a desirable policy as to imports and tariffs from the standpoint of the effect on cost to the consumer, effect on domestic industry and considerations of national defense.

Gas on Unrestricted Market Is Urged As FPC Closes Kansas City Hearing

Natural gas, free from all restrictions on exportation and use, should be allowed to seek its place in a market of free competition with other fuels.

This was developed during the final sessions, September 26, of the gas hearing conducted by the Federal Power Commission at Kansas City. The second hearing will open at Oklahoma City October 9.

The testimony last week included a plea by the Kansas Corporation Commission that the price of natural gas be raised to equal its intrinsic value, and that monopolistic contracts were executed by natural gas distributors in the Hugoton, Kansas, gas field.

Milton M. Kinsey, president of the St. Louis Board of Public Service, urged that there be no restrictions placed on the exportation nor in the use of natural gas. Kinsey further recommended that direct industrial sales made by pipe lines be placed under some kind of control, preferably under a state or local regulatory agency.

Favors No Restrictions

St. Louis, he explained, is seeking to arrange for straight natural gas service for both domestic and commercial use throughout the city. Mississippi River Fuel Corporation has a pipeline running into St. Louis furnishing straight natural to 14 industrial concerns and natural gas to the Laclede Gas Light Company which mixes it with manufactured gas to serve other industries. This, he said, is the contractural arrangement between Mississippi and Laclede, and efforts are being made to alter this so that the pipe line company can provide Laclede with sufficient straight natural for all purposes.

Kinsey viewed with concern any tendency restricting or prohibiting exportation of natural gas.

"In this catagory also is the substitute suggestion for the enactment of severance taxes which would have a similar final result," he said. "A provincial policy on the part of one state which is the producer of a natural resource would tend toward retaliatory action by other states."

St. Louis, which has no gas production in its immediate vicinity. Kinsey added, is "opposed to any control over the 'end use' of gas unless it can be demonstrated beyond any reasonable doubt that, as a national policy, such control is essential."

Kinsey suggested the possibility that direct industrial sales by interstate pipelines might, by appropriate action by Congress, be delegated to the local regulatory commission. Or Congress might enact a law prohibiting an interstate pipe line company from selling gas direct to an ultimate consumer.

Ben C. Comfort, president of the Mississippi River Fuel Corporation, thought that since natural gas competes with oil and coal the natural gas companies must have some flexibility and therefore must not be subjected to rigid regulations because neither coal nor oil are so subjected.

L. B. Taylor, conservation engineer, Kansas Corporation Commission, asserted that physical waste in dry fields in Kansas is at a minimum, and that while there is some venting of casing head gas, the over-all situation is good as a result of state regulatory action.

Richard B. McEntire, chairman of the Kansas Commission, offered a resolution adopted by the commission which urged that the price of natural gas be raised to equal its intrinsic value.

The resolution declared that an adequate supply of natural gas is necessary for the future welfare of the people of Kansas and the general area; that the present price for gas is below the intrinsic value and is not yielding proper return; that such a situation is unfair to the landowner and producer and is detrimental to the state as a whole, and that further hinders exploration for additional reserves.

"The policy of establishing a rate based upon the production property of transmission companies based upon original cost thereof has the effect of making permanent the inequities and evils in the current depressed price," the resolution declares.

Wants Good Markets

"We are interested in obtaining additional markets for Kansas gas," McEntire asserted, "but we want only the good markets."

Later he explained that he does not feel there is any "inferior" or "superior" uses for gas, but that the use of gas is justified for any purpose, as long as society can and will pay the price the product is worth, emphasizing by that he meant the price at the wellhead.

He said he did not know how far FPC can go in rectifying its action in adopting the original cost policy, under present statutes, but declared that unless some corrective steps are taken it will be difficult to obtain as great a degree of conservation as is desired and increased prices for gas.

Also he explained that Kansas is going to insist before the FPC, that the word "public" in the expression "public convenience and necessity" be interpreted so as to include producers, in an effort to get a fair price for Kansas gas.

Edward L. Clark, state geologist for Missouri, emphasized that his state has no prospective gas potentialities.

Glen R. Gilcrest, Missouri state engineer, read a statement signed by the chairman of the public service commission, Morris E. Osburn, which said Missouri "is opposed to the transportation of natural gas through this state for use beyond its borders, if that used beyond the borders will have the effect of curtailing the supply of natural gas that will be available for use in this state," and that "natural gas should be made available in this state in quantity sufficient to serve every demand."

Hugoton Reference

William Broadhurst of Tulsa, vice president and treasurer of Helmerich & Payne, oil and gas producers, testified on what he termed monopolistic and exclusive contracts executed in the Hugoton, Kansas, gas field.

Broadhurst introduced a contract he said was offered his company by the Argus Gas Company of Omaha, but which never was consummated, which would have bought gas at about 2 cents per thousand cubic feet—2 cents less than the price paid to other producers.

Henry Keplinger of Tulsa, petroleum engineer, testified there should be a ratable take of gas from any common source of supply.

RFC Holds in Abeyance Directive to Empty and Close Big Inch Pipe Lines

Unfavorable reaction to its directive for the emptying and closing down of the two Big-Inch pipe lines has lead the Reconstruction Finance Corporation to hold the order in abeyance pending an investigation to determine the best disposition which may be made of the facilities.

Protests against the order were prompt and widespread, with some 100 members of Congress immediately up in arms.

Although the RFC publicly announced its directive to discontinue operation of the government-owned pipe lines, deferment of the order was reported only to members of Congress and by them relayed to the public.

Attention of the House was called to the reprieve given the lines, by Congressman Jerry Voorhis who, a week earlier, had been loud in his criticism of the RFC policy.

Voorhis last week declared an engineers' report shows that transportation of oil through the Big-Inch from East Texas to other points "would be just as cheap as other methods of transportation."

"It is my earnest hope," he said, "that this will be thoroughly considered before such a tremendous investment of the people's money as has gone into this line will be allowed to be either wasted or to fall into monopolistic control.

"Clearly there are many interests that would like nothing better than to see the line abandoned and allowed to rust away. But from the viewpoint of the people's interest the right solution is for it to be operated as a common carrier to which all producers and consumers, large and small, would have access on exactly equal terms."

The question of disposal of the pipe lines and other government-owned oil facilities is expected to be taken up within the next month by the O'Mahoney Committee, and the House Interstate Commerce Committee may consider the same problem shortly thereafter.

Reconversion to Be Topic At California Meeting

The California Natural Gasoline Association will meet October 12 in Los Angeles to discuss postwar problems confronting the refiner, producer and natural gasoline manufacturer.

Marion L. Arnold, president, said a subject uppermost in the minds of the industry is that of converting from a wartime basis to normal operations.

Natural Gasoline Registers Decline for Month of July

Daily average production of natural gasoline and allied products again declined in July, dropping from 12,993,000 gallons in June to 12,894,000 gallons, the Bureau of Mines has reported. Decreases were experienced in most districts except Texas and California.

Production of light products from natural gasoline and cycle plants during July included 188,623,000 gallons of natural gasoline, against 183,309,000 gallons in June; 33,645,000 gallons of natural gasoline mixture, against 32,320,000 gallons; 34,308,000 gallons of raw condensate, against 34,113,000 gallons; 18,799,000 gallons commercial butane-propane mixture, against 19,571,000 gallons; 33,565,000 gallons of normal butane, against 32,301,000 gallons; 22,148,000 gallons of propane, against 21,735,000 gallons; 16,303,000 gallons of liquefied petroleum gas mixtures, against 16,090,000 gallons; 14,114,000 gallons of iso-butane, against 13,885,000 gallons; 13,084,000 gallons of iso-pentane, against 12,050,000 gallons; 22,185,000 gallons of finished gasoline and naphtha; against 21,181,000 gallons, and 2,943,000 gallons of other products, against 3,231,000 gallons.

Total stocks decreased more than 16 million gallons during the month, those at refineries dropping from 98,154,000 to 88,494,000 gallons and those at plants and terminals from 100,228,000 to 93,698,000 gallons, the bureau reported.

Complete Willamar Field Drilling Contract

A barbecue celebrating completion of a $2 million, 50-well contract with Pan American Production Company in the Willamar Field of Willacy County, Texas, was given in that field September 22 by Tom Graham, drilling contractor. Even before the celebration which was attended by 500 employes and other friends, Graham had started work on several Pan American wells under a second 50-well contract. Graham also is an independent operator and has several new fields to his credit.

The picture above shows a number of Graham's veteran employes who attended the picnic. They are, left to right: L. L. Whatley, W. H. Newberry and W. E. Childs, drillers, all of Raymondville; Sam Coyle of Harlingen, rig building contractor who formerly was employed by Graham; Emmett Collins, driller, of Raymondville; Tom Graham; H. H. McFarland, independent contractor of Raymondville, formerly Graham's drilling superintendent; Guy Manning, drilling superintendent, Raymondville; J. A. Kimmey, general superintendent, Corpus Christi; W. J. Blackmon, company secretary, Corpus Christi; T. B. Holland, production superintendent, Corpus Christi; Coleman Gimmick, welder, Lyford and B. E. Rouse, district Production foreman, Freer.

Roumanian Properties Found in Fair Shape; American Equipment Is Needed

After being out of touch with the operations of Romano-Americano Oil Company in Roumania since the last days of 1941, representatives of the parent company, Standard Oil Company (New Jersey) have finally arrived in Bucharest from the United States. John Finke, representative of the stockholders, is now in Roumania and Ralph Bolton, European manager of Standard's European producing properties is en route.

Reports from the manager of the company in Bucharest, V. C. Georgescu, who was placed in a concentration camp in 1941, but who was released by the Roumanian "coup d'etat" in May, 1944, and who shortly after resumed direction of the affairs of the company with the aid of a Roumanian staff, indicate that the producing properties are in unexpectedly good shape. Refining facilities were badly damaged by allied bombings but the wells and producing properties generally were reported by Georgescu as being in good shape, excepting for the dire need of modern equipment.

When Roumania and the United States went to war in December of 1941, the average daily production of Romano-Americano was 15,000 barrels, as compared with the present production of 12,000 barrels per day. Bottom hole pressure, in flowing wells, has shown no greater decline than the ordinary orderly withdrawal of crude would indicate. The refinery's capacity, however, was seriously reduced by American bombings but at the present time is running at the rate of 12,000 barrels per day. Georgescu, pre-war manager of the company, turned his attention, upon his release in from a concentration camp, to the release of American fliers in Roumania who had bombed the company's properties.

Equipment Needed

An official of the company in New York told THE OIL WEEKLY that its representatives in Roumania report the need of a great deal of American oil country equipment in order to carry out the proposed drilling campaign of 1946. Lists of the equipment needed are understood to contain almost every item used in modern drilling, particularly deep drilling. A million dollars worth of pipe owned by the company was seized by Russia as "spoils of war."

Shortly prior to the beginning of the war the company had begun to find production in the Miocene. (Previously to this time production had come from the Pliocene.) Now production is coming not only from the Pliocene but from the Miocene and the Oligocene as well, with prospects of heavy operations at depths ranging from 10,000 to 12,000 feet and even deeper. Geological markers are now in process of being established in the deeper zones.

"There are as many possibilities for drilling in Roumania today as there were 20 years ago," said the executive. "The difference is that they are at greater depths than we knew then."

The deeper discoveries have been made in the areas where production had been developed at shallower depths.

But despite the plea for American equipment from Roumania, the parent company has not as yet made an appropriation for equipment purchases because it is impossible to convert Roumanian lei into dollars. Under the various agreements accompanying peace for Roumania, none of the oil is going to areas dealing in dollars or pounds sterling. Consequently such funds as may be spent in America must come from some other source than the sale of the Roumanian oil. It is understood that the 1945 reparations situation involved figures something like the following: production of Roumania estimated at 4,100,000 tons for the year; reparations (largely to Russia without payment from Russia) 2,000,000 tons; domestic consumption 1,500,000 tons, leaving 600,000 tons. But in May of this year Russia demanded another 500,000 tons, leaving practically nothing for movement to export.

Crude Oil Production in the United States

(Estimates compiled by The OIL WEEKLY. All figures indicate daily averages, in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED Sept. 29	Sept. 22
Alabama	250	1,000
Arkansas	78,000	78,800
California	865,300	880,200
Colorado	12,200	10,650
Florida	200	200
Illinois	189,200	204,550
Indiana	13,200	13,000
Kansas	272,500	273,450
Kentucky	29,550	28,000
Louisiana	363,800	363,200
North Louisiana	71,800	71,200
South Louisiana	292,000	292,000
Michigan	45,100	51,100
Mississippi	52,550	51,050
Missouri	100	100
Montana	21,945	21,400
Nebraska	900	850
New Mexico	108,300	108,300
New York	12,700	13,850
Ohio	6,900	6,850
Oklahoma	391,300	334,600
Pennsylvania	35,500	35,150
Tennessee	35	35
Texas	1,882,925	1,882,925
Upper Gulf Coast	467,750	467,750
East Texas Field	315,200	315,200
Rest of Eastern Texas	128,425	128,425
Lower Gulf Coast	217,900	217,900
Southwest Texas	57,600	57,600
South Central Texas	16,150	16,150
West Texas	450,100	450,100
North Texas	141,800	141,800
Panhandle	88,000	88,000
West Virginia	8,300	8,100
Wyoming	108,050	113,800
Total United States	4,498,805	4,541,160

Hearings Soon on Central Research Agency Proposal

The Senate Military Affairs and Commerce Committees will institute joint hearings October 8 on President Truman's recommendation for centralization of federal research which is seen by industry as enabling the government to undertake studies in the petroleum and practically all other fields under a mandate to support investigation into "all matters pertaining to the defense and security of the nation."

While the plan of a single federal research agency has support of Washington officials, industry spokesmen have indicated they would oppose it on the ground that it would stifle private research and eventually make all industry dependent upon government science.

Individual companies have expended large sums on research to increase and better their own products, but are unlikely to continue on the same scale if they believe the government might undertake studies in the same field and make the results generally available.

The hearings, which are expected to require three or four weeks, according to Senators Harley M. Kilgore of West Virginia and Warren G. Magnuson of Washington, chairmen of the subcommittees in charge of the legislation.

Price Raised on Gas Used In Carbon Black Making

Study of ceiling prices for residue gas produced in the Texas panhandle and its effects on the production of channel carbon black and the synthetic rubber program, culminated September 25 in an OPA announcement that the ceiling price for the greater part of the production would be more than doubled, effective October 1.

Past ceiling prices for gas sold for production of carbon black have averaged 1.29 cents per 1000 cubic feet on normal production and 3.5 cents per 1000 cubic feet on certain additional production.

The new ceilings for both normal and additional production will average 2.75 cents per 1000 cubic feet for sour residue gas and 3.25 cents for sweet residue gas, the actual ceiling price depending upon the B.T.U. content.

Troja Heads ANLC

A former oil man, Lieutenant Colonel John F. Troja, has been placed in charge of the equipment division of the Army-Navy Liquidation Commission, currently charged with the disposition of all overseas war surplus and residue, a work which is expected shortly to be transferred to the State Department.

Before entering the Army Colonel Troja was with Standard Oil Company and Arabian American Oil Company. A graduate of the University of Arizona, Colonel Troja went to Saudi Arabia with the Arabian American Oil Company on refinery construction.

PAW's Final Estimated Report Registers Decline

Petroleum demand in October will require the daily average production of 4,464,400 barrels of crude and 339,170 barrels of other liquids, PAW has estimated.

The October requirement for crude will be 108,500 barrels daily less than the estimated needs for September, to be achieved by a 100,000-barrel decrease in Texas output and a 1500-barrel increase in Montana production.

It was explained that the decline in Texas production will be possible because of the additional crude supplies which will become available in the emptying of the line fill and stocks of the Big-Inch pipe line. The increase in Montana is designed to aid in satisfying Canadian demand.

The October estimates was the final report of PAW on anticipated demand, hereafter to be handled by the Bureau of Mines in its monthly demand forecasts.

October daily production by states, as estimated by PAW, included 13,500 barrels in New York, 37,500 barrels in Pennsylvania, 8200 barrels in West Virginia, 200,000 barrels in Illinois, 13,000 barrels in Indiana, 274,000 barrels in Kansas, 28,000 barrels in Kentucky, 47,000 barrels in Michigan, 1000 barrels in Nebraska, 7000 barrels in Ohio and 380,000 barrels in Oklahoma.

Production in Alabama was set at 500 barrels; Arkansas, 75,000; Louisiana, 350,000; Mississippi, 47,000; New Mexico, 100,000; Texas, 1,868,000; Colorado, 12,000; Montana 23,500; Wyoming, 93,200, and California, 886,000 barrels.

Production of petroleum liquids other than crudes was estimated at the September level, as follows: Pennsylvania, 800 barrels; West Virginia, 5000; Illinois, 12,000; Kansas, 4500; Kentucky, 2600; Michigan, 800; Ohio, 500, Oklahoma, 28,000; Arkansas, 5400; Louisiana, 42,000; New Mexico, 6800; Texas, 166,000; Montana, 300; Wyoming, 3500, and California, 60,970 barrels.

Corrosion Engineers Plan Annual Convention May 7-9

Annual convention of the National Association of Corrosion Engineers will be held May 7-9, 1946, at Kansas City, Missouri, with headquarters in the President Hotel.

There will be an exhibition of corrosion-resistant, corrosion-mitigation and various types of protective materials in the main arena of the Municipal Auditorium in addition to the technical programs.

The convention program includes papers on corrosion practices as developed in representative industries, such as power plants, municipal and other waterworks, transportation companies, buried communication lines, refineries, chemical manufacturing and processing plants, and oil pipe lines.

Authority of International Commission Limited in New Anglo-American Oil Pact

A revised Anglo-American petroleum agreement was signed in London September 24 by Secretary of the Interior Harold L. Ickes for the United States and Emanuel Shinwell, minister of fuel and power, for the United Kingdom.

Complete accord on the agreement, which is to be substituted for the compact signed in Washington August 8, 1944, was reached in less than a week after the current negotiations started.

Ickes, Deputy Administrator Ralph K. Davies and Charles B. Rayner, petroleum adviser to the State Department, represented the United States while the British group comprised Shinwell and Hector McNeil, Parliamentary Undersecretary of State for Foreign Affairs.

United States official advisers included Robert Hardwicke, chief counsel of PAW; John A. Loftus, chief of the State Department petroleum division; Gordon M. Sessions, foreign relations assistant to Ickes; Samuel Botsford, PAW, recording secretary; Victor Barry, petroleum attache at the American embassy in London, and James C. Sappington, also of the embassy.

Advisers to the United Kingdom delegation were Sir Norman Duke and F. C. Starling of the Ministry of Fuel and Power; Sir David Waley of the Treasury; R. A. Gallop, Foreign Office, and Victor Butler, petroleum representative in Washington, with K. L. Stock of the Ministry of Fuel and Power as secretary.

The revised agreement, which will go to the Senate shortly for ratification, embodies the changes demanded in the original treaty by the American oil industry and bears only slight resemblance to the pact which President Roosevelt sent to the Senate in August, 1944, and later withdrew.

IPAA View

The new agreement appears definitely to preclude any possibility of its use to limit action by Congress on imports of oil, prevent the establishment of cartels, and limit strictly the authority of the proposed international commission, it was commented by Russell B. Brown, general counsel for Independent Petroleum Association of America.

In the program laid down for the commission, Brown saw benefits of an industrial policy shaped with great intelligence because of knowledge of the full facts.

"No implication exists in this document of an attempt to limit the freedom of the domestic industry and explore and develop oil resources in the United States," he added.

Brown saw uncertainty only in reports that an unwritten agreement had been entered into that if the British, by reason of lack of dollar exchange, found it necessary to limit imports of dollar oil it would not be considered a breach. He pointed out that press dispatches from London left this point unclear, with one correspondent reporting that Ickes had agreed that the problem would have to be recognized but that any exclusion of dollar oil would be contrary to the spirit of the agreement.

Atlantic Charter Omitted

It was set forth in the preamble, which itself omitted the original references to conservation and the Atlantic Charter as the basis for production and distribution, that the agreement is a preliminary to the calling of an international conference to consider a multilateral agreement.

Reference is omitted to the idealistic development of resources so as to encourage the sound economic advancement of backward countries in favor of a simple statement that adequate supplies of petroleum should be accessible to all countries on a competitive and nondiscriminatory basis but that the interests of producing countries should be safeguarded with a view to their economic advancement.

A new Article II stipulates that all valid concession contracts and rights shall be respected, that the principle of equal opportunity shall extend to the acquisition of future rights and that neither exploration, development, refinry construction and operation or distribution shall be hampered by restrictions inconsistent with the purposes of the agreement.

Article III calls for an international

United Nations Shipping Problems to Be Discussed

Decisions that will shape the immediate future of all United Nations ocean shipping and that of several neutrals are expected to result from a joint session of the United Maritime executive board in Washington October 4.

An important subject to be dealt with will be policy as to the continuance of the United Nations shipping pool, which involves questions relating to the return of requisitioned and chartered vessels to their owners.

Tankers as well as dry cargo vessels will be involved in any decisions reached by the conference, which will be attended by representatives of the United States, United Kingdom, the Netherlands, Norway and France, who later will meet with representatives of the associate member nations — Belgium, Canada, Greece, Poland, Australia, India, New Zealand, Union of South America, Brazil, Sweden, Chile and Denmark.

Meetings also are scheduled for the shipping employment policy committee, which determines cargo requirements and allocation of tonnage in connection with the utilization of ships in the United Nations pool.

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conference, and Article IV sets up the international petroleum commission, to be composed of six members, instead of eight originally contemplated.

The original program to have the commission make suggestions and recommendations was eliminated and it would be authorized, specifically, to:

Study the problems of the international petroleum trade caused by dislocations resulting from war;

Study past and current trends in the international oil trade;

Study the effects of changing technology upon the industrial oil trade;

Prepare periodic estimates of world demands for oil and of the supplies available to meet them, and report as to means by which such demands and supplies may be correlated to further the efficient and orderly conduct of trade; and

To make such additional reports as may be appropriate for achieving the purposes of the agreement and for the broader general understanding of the problems of the international oil trade.

New Artciles

A new Article VI provides that reports of the commission shall be published unless either government decides otherwise in any particular case, and that nothing in the agreement shall be construed "to require either government to act upon any report or proposal made by the commission, or to require the nationals of either government to comply with any report or proposal made by the commission, whether or not the report or proposal is approved by that government."

Another new article—VII—sets forth directly the general purpose of the agreement, "to facilitate the orderly development of the international petroleum trade," and stipulates that no provision, with the exception of Article II, is to be construed as applying to the operation of the domestic industry in either country, nor to impair or modify any law or regulation, or the right to enact any law or regulation, relating to the importation of oil into either country.

The definition of the word "country" is amended, in view of new conditions arising out of the war, even more broadly than the industry sought.

Reported from London, but not incorporated in the agreement, was a concession made by the United States to Britain in return for the acceptance by the British government of the many changes proposed by this country

That concession, it was said, is an understanding that if the United Kingdom lacks enough dollars to buy a fixed quota of American oil in any one year and consequently increases its imports from the Middle East, where payment can be made in sterling, the United States will not regard such action as a breach of the agreement.

Pointing out that the signed agreement, in major respects, is the same as the draft submitted by the United States delegation, Secretary Ickes explained that the changes made were minor in nature and were adopted in the interest of practicability and clarity at the request of the British.

All changes were discussed with and approved by the industry advisers, he declared.

Text of Agreement

Text of Agreement is as follows:

Preamble: The government of the United States of America and the government of the United Kingdom of Great Britain and Northern Ireland, whose nationals hold, to a substantial extent jointly, rights to explore and develop petroleum resources in other countries, recognize:

1. That ample supplies of petroleum, available in international trade to meet increasing market demands, are essential for both the security and economic well-being of nations;

2. That for the foreseeable future the petroleum resources of the world are adequate to assure the availability of such supplies;

3. That the prosperity and security of all nations require the efficient and orderly development of the international petroleum trade;

4. That the orderly development of the international petroleum trade can best be promoted by international agreement among all countries interested in the petroleum trade, whether as producers or consumers.

The two governments have therefore decided, as a preliminary measure to the calling of an international conference to consider the negotiation of a multilateral petroleum agreement, to conclude the following agreement.

Article I

The signatory governments agree that the international petroleum trade in all its aspects should be conducted in an orderly manner on a worldwide basis with due regard to the considerations set forth in the preamble, and within the framework of applicable laws and concession contracts. To this end and subject always to considerations of military security and to the provisions of such arrangements for the preservation of peace and prevention of aggression as may be in force, the signatory governments affirm the following general principles with respect to the international petroleum trade:

(A) That adequate supplies of petroleum, which shall in this agreement mean crude petroleum and its derivatives, should be accessible in international trade to the nationals of all countries on a competitive and nondiscriminatory basis;

(B) That, in making supplies of petroleum thus accessible in international trade, the interests of producing countries should be safeguarded with a view to their economic advancement.

Article II

In furtherance of the purposes of this agreement, the signatory governments will so direct their efforts:

(A) That all valid concession contracts and lawfully acquired rights shall be respected and that there shall be no interference directly or indirectly with such contracts or rights;

(B) That with regard to the acquisition of exploration and development rights the principle of equal opportunity shall be respected;

(C) That the exploration for and development of petroleum resources, the construction and operation of refineries and other facilities, and the distribution of petroleum shall not be hampered by restrictions inconsistent with the purposes of this agreement.

Article III

1. With a view to the wider adoption of the principles embodied in this agreement, the signatory governments agree that as soon as practicable they will propose to the governments of all interested producing and consuming countries the negotiation of an international petroleum agreement which *inter-alia* would establish a permanent international petroleum council.

2. To this end the signatory governments agree to formulate at an early date plans for an international conference to negotiate such a multilateral petroleum agreement. They will consult together and with other interested governments with a view to taking whatever action is necessary to prepare for the proposed conference.

Article IV

1. Numerous problems of joint immediate interest to the signatory governments with respect to the international petroleum trade should be discussed and resolved on a cooperative interim basis if the general petroleum supply situation is not to deteriorate.

2. With this end in view, the signatory governments agree to establish an international petroleum commission to be composed of six members, three members to be appointed immediately by each government. To enable the commission to maintain close contact with the operations of the petroleum industry, the signatory governments will facilitate full and adequate consultation with their nationals engaged in the petroleum industry.

3. In furtherance of and in accordance with the purposes of this agreement, the commission shall consider problems of mutual interest to the signatory governments and their nationals, and with a view to the equitable disposition of such problems it shall be charged with the following duties and responsibilities:

(A) to study the problems of the international petroleum trade caused by dislocations resulting from war;

(B) to study past and current trends in the international petroleum trade;

(C) to study the effects of changing technology upon the industrial petroleum trade;

(D) to prepare periodic estimates of world demands for petroleum and of the supplies available for meeting the demands, and to report as to means by which such demands and supplies may be correlated so as to further the efficient and orderly conduct of the international petroleum trade;

(E) To make such additional reports as may be appropriate for achieving the purposes of this agreement and for the broader general understanding of the problems of the international petroleum trade.

4. The commission shall have power to regulate its procedure and shall establish such organization as may be necessary to carry out its functions under the agreement. The expenses of the commission shall be shared equally by the signatory governments.

Article V

The signatory governments agree:

(A) That they will seek to obtain the collaboration of the governments of other producing and consuming countries for the realization of the purposes of this agreement, and to consult with such governments in connection with activities of the commission;

(B) That they will assist in making available to the commission such information as may be required for the discharge of its functions.

Article VI

The signatory governments agree:

(A) That the reports of the commission shall be published unless in any particular case either government decides otherwise;

(B) That no provision in this agreement shall be construed to require either government to act upon any report or proposal made by the commission, or to require the nationals of either government to comply with any report or proposal made by the commission, whether or not the report or proposal is approved by that government.

Article VII

The signatory governments agree:

(A) That the general purpose of this agreement is to facilitate the orderly development of the international petroleum trade, and that no provision in this agreement, with the exception of Article II, is to be construed as applying to the operation of the domestic petroleum industry within the country of either government;

(B) That nothing in this agreement shall be construed as impairing or modifying any law or regulation, or the right to enact any law or regulation, relating to the importation of petroleum into the country of either government;

(C) That, for the purposes of this article, the word "country" shall mean

(1) In relation to the government of the United Kingdom of Great Britain and Northern Ireland, the United Kingdom, all British colonies, overseas territories, protectorates, protected states, and all mandated territories administered by that government and

(2) In relation to the government of the United States of America, the continental United States and all territory under the jurisdiction of the United States, lists of which, as of the date of this agreement, have been exchanged.

Article VIII

This agreement shall enter into force upon a date to be agreed upon after each government shall have notified the other of its readiness to bring the agreement into force and shall continue in force until three months after notice of termination has been given by either government or until it is superseded by the international petroleum agreement contemplated in Article III.

In witness whereof the undersigned, duly authorized thereto, have signed this agreement.

Strikes Cut Refinery Runs and Output Of Products; Gasoline Stocks Decline

Early effects of the closing down of refineries because of the strikes were reflected in the statistics of the industry for the week ended September 22. Refinery runs of crude in the United States were curtailed by 117,000 barrels daily and there was a small reduction in crude production. Refinery production of all major products decreased, and there was a heavy draft on stocks of gasoline. Residual fuel also came from storage. Stocks of distillate fuel oil continued to increase but at a low rate for the season.

United States crude production averaged 4,528,000 barrels daily, down 10,000 from the week before, The American Petroleum Institute reported. The output was 216,000 barrels a day or 4.5 percent lower than in the corresponding week last year.

Crude runs to stills averaged 4,499,000 barrels daily, down 117,000 from the previous week. The new rate was 158,000 barrels a day or 3.4 percent under runs in the comparable week a year ago.

Crude oil stocks totaled 214,480,000 barrels on September 15, having increased 759,000 barrels within the week, Bureau of Mines figures showed. One year previously they were about 7 million barrels higher.

Production of gasoline amounted to 14,545,000 barrels in the week ended September 22, according to the API. That was 326,000 barrels less than was produced in the preceding seven days, although 406,000 barrels or 3 percent more than output in the comparable week last year. Stocks of finished and unfinished gasoline were reduced by the relatively large amount of 2,308,000 barrels during the week, having come down to 82,901,000 barrels, which was, however, 5,778,000 barrels or 7.5 percent more than the 77,123,000 barrels held September 23 last year. The storage gasoline used came wholly from military stocks, which dropped 2,359,000 barrels or from 35,104,000 to 32,745,000 barrels. The later amount compared with 36,837,000 barrels held on September 23 last year. Stocks of civilian grade increased slightly, from 50,105,000 to 50,156,000 barrels, and the new total was about 10 million barrels more than the 40,286,000 barrels of civilian grade available a year previously.

Gas oil and distillate fuel oil production of 4,589,000 barrels in the September 22 week was 266,000 barrels less than in the previous week and only a little more than output in the corresponding week last year.

Natural Gasoline Price Not to Affect Construction

The break in the price of natural gasoline on the Texas coast following the end of the war will not affect the intensive natural gasoline plant construction program mapped for that area, oil executives pointing out that plans for building were not based solely on price, but rather on conservation.

The Breckenridge f.o.b. price has dropped from 4.125 to 3.5 cents per gallon since late August, a decline attributed to cancellation of aviation gasoline contracts. The North Texas-Oklahoma-Kansas price has remained firm at 4.5 cents.

Refinery strikes may further unsteady prices. However the demand probably will surge again when refineries resume operations, this because of increased need for blending agents required for stepped-up imports of oils that are short on light ends.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.

(All figures in thousands of barrels—add 000)

HIGHS AND LOWS OF RECENT YEARS

ITEM	Crude Oil Prod. Barrels Daily	Crude Oil Prod. Week Ended	Runs to Stills Barrels Daily	Runs to Stills Week Ended	Crude Stocks Barrels	Crude Stocks Week Ended	Gasoline Stocks Barrels	Gasoline Stocks Week Ended	Gasoil and Distillate Stocks Barrels	Gasoil and Distillate Stocks Week Ended	Residual Fuel Oil Stocks Barrels	Residual Fuel Oil Stocks Week Ended
Highs:												
1941	4,337	11-22	4,120	10-18	266,187	3-29	99,727	3-29	[1]54,983	11-15	102,448	1- 4
1942	4,337	2- 7	3,961	1- 3	263,208	3-28	[1]109,281	3-14	47,861	11-14	95,857	1- 8
1943	4,436	11-13	4,331	12- 4	245,752	5-29	94,159	3-20	47,187	11-27	72,881	1- 2
1944	4,762	9-30	4,798	12-30	240,992	1- 1	89,162	4- 1	48,162	10-28	64,744	10- 7
1945	[1]4,944	7-14	[1]5,140	8-18	224,079	6- 2	99,012	3-24	43,620	9-22	56,074	1- 6
Lows:												
1939	[3]1,601	8-26	3,125	2-18	[2]229,127	10-12	71,152	10- 7	20,722	4-15	105,397	4- 3
1941	3,364	1-11	3,490	1-18	240,399	11-15	79,923	10- 4	28,382	4-12	90,914	7-13
1942	3,297	7- 4	3,393	5-23	231,896	12-12	75,934	12- 5	29,240	4-25	72,962	12-26
1943	3,821	1- 9	3,579	3-18	232,191	1- 9	68,182	10-16	30,732	4- 3	57,596	12-25
1944	4,357	1- 1	4,228	2-12	220,258	9- 9	76,302	1- 1	30,232	4-19	49,737	3-18
1945	4,578	9- 8	4,616	9-15	211,813	8-25	82,901	9-22	26,483	3-17	38,548	5-26

TRENDS OF 1944 AND 1945

Trends in Week Ended:	Crude Oil Production Daily	Crude Oil Runs to Stills Daily	Crude Oil Stocks Week End	Gasoline Production Weekly	Gasoline Stocks Week End	Gasoil and Distillate Production Weekly	Gasoil and Distillate Stocks Week End	Residual Fuel Production Weekly	Residual Fuel Stocks Week End
1944:									
January 1	4,357	4,453	240,992	13,192	76,302	4,575	42,310	9,141	57,380
January 29	4,400	4,359	240,251	13,427	81,075	4,054	37,266	8,889	52,857
February 26	4,423	4,377	237,137	13,183	85,248	4,558	33,766	8,952	51,387
March 25	4,385	4,443	236,285	13,362	87,287	4,979	31,319	9,018	51,669
April 1	4,383	4,435	234,667	13,824	89,162	4,450	30,530	8,367	51,326
April 29	4,431	4,300	235,342	13,126	88,342	4,284	30,236	8,398	49,985
May 27	4,514	4,532	234,423	13,502	86,468	4,702	32,035	8,568	49,812
July 1	4,587	4,638	228,860	14,052	83,559	4,496	35,360	8,872	52,235
July 29	4,608	4,627	225,112	14,115	82,665	4,833	38,135	8,900	56,280
August 26	4,667	4,698	222,931	14,112	80,740	4,566	41,453	8,680	59,839
September 30	4,762	4,775	222,393	14,494	78,028	4,622	45,329	9,292	64,226
October 28	4,740	4,658	223,235	14,117	79,058	4,772	48,705	8,985	64,382
December 2	4,712	4,693	221,591	14,853	80,427	4,082	45,832	8,981	61,727
December 9	4,704	4,552	220,258	14,611	80,880	4,056	44,430	8,923	60,458
December 16	4,695	4,537	222,075	14,145	82,747	4,353	42,413	8,727	59,280
December 23	4,729	4,682	222,575	14,035	83,355	4,605	40,846	8,798	58,509
December 30	4,705	4,798	222,998	15,342	86,614	4,257	39,495	9,156	57,430
1945:									
January 27	4,727	4,756	221,310	14,957	88,223	4,843	33,651	9,252	51,119
February 24	4,777	4,803	219,351	15,500	95,972	4,958	28,753	9,084	46,713
March 31	4,781	4,677	223,782	14,644	98,758	4,548	26,889	9,184	41,745
April 28	4,805	4,780	223,474	14,633	94,068	4,636	28,273	9,379	39,813
May 26	4,887	4,950	222,831	15,194	89,121	4,667	29,184	9,670	38,548
June 2	4,859	4,804	224,079	15,317	88,696	4,857	29,819	9,437	39,022
June 9	4,853	4,827	221,552	15,256	87,896	4,842	30,339	9,382	38,996
June 16	4,888	4,915	221,932	15,132	87,504	5,342	30,397	9,252	39,482
June 23	4,898	5,002	220,974	15,367	87,462	5,014	31,761	9,558	39,893
June 30	4,903	4,999	220,781	15,546	86,472	4,910	32,213	9,077	40,488
July 7	4,886	5,006	217,250	15,082	86,329	4,875	33,667	9,238	40,754
July 14	[1]4,944	4,945	216,355	15,349	85,401	5,197	34,804	9,337	41,489
July 21	4,944	4,927	218,108	15,430	85,930	5,090	35,458	9,071	42,480
July 28	4,930	4,996	218,507	16,106	86,008	4,598	36,071	9,586	42,283
August 25	4,892	4,931	[4]211,813	15,986	84,693	4,960	39,782	9,356	46,201
September 1	4,876	4,685	215,169	14,904	84,218	5,030	40,859	8,528	46,807
September 8	4,518	4,640	213,721	14,853	85,230	4,478	42,189	8,240	47,871
September 15	4,538	4,616	214,480	14,871	85,209	4,855	43,507	8,188	48,470
Sept. 22 1945	**4,528**	**4,499**	.....	**14,545**	**82,901**	**4,589**	**43,620**	**7,928**	**47,601**
Sept. 23, 1944	4,744	4,657	[5]221,490	14,139	77,123	4,574	43,175	9,109	62,533
Change:									
In week	—10	—117	+759	—326	—2,308	—266	+113	—260	—869
In year	—216	—158	—7,010	+406	+5,778	+15	+445	—1,181	—14,932
In year	—4.5%	—3.4%	—3.2%	+2.9%	+7.5%	+0.3%	+1.0%	—13.0%	—23.9%

[1] All time peak. [2] Lowest between January, 1922 and July 1, 1944. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Lowest since December, 1921. [5] Stocks, September 16, 1944

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Return of American Oil Interests Is Predicted in Mexican Capital

Reported recent conferences in Mexico City between Phillips Petroleum Company officials and Mexican government authorities are leading oil circles in the Mexican capital to predict a return of American petroleum interests.

Although Phillips representatives departed for Venezuela without making a definite statement as to objectives, they left much speculation in their wake.

Senator Martinez Chavarria, an old champion of expropriation for instance, recently went on record as suggesting that the American firms are trying to stage a comeback in Mexico.

And "Oraculo," whose column, "Present Indicative," in the Mexico City daily "Excelsior" is considered one of the most reliable guides to behind-the-scene political developments, affirms that "the expropriated companies have been attempting to arrange a pact with the Mexican government since 1943."

Rental Proposed

"The companies have been convinced for some time that they will never get back their former properties and have since abandoned efforts to recover them," he writes.

"By means of an arrangement with our government, similar to that which the same companies effected with Venezuela, they want to rent our wells for 25 years or more. Mexico would receive a percentage of the enterprises' liquid profits.

"The main argument of the companies is as follows:

"The patents, formulas and equipment to convert the postwar oil industry into one of the world's leaders are in the hands of a relatively few persons. In many instances, even the interested governments—British, Dutch and American—cannot acquire them.

"Without these secret formulas, no petroleum industry will prosper. Without them, that of Mexico will be deprived of its principal markets, of tankers and equipment indispensible to convert petroleum into plastics, for example, and to refine it to the superlative grades which will be required in years to come.

Details of Plan

"The oil companies have proposed the following to Mexico:

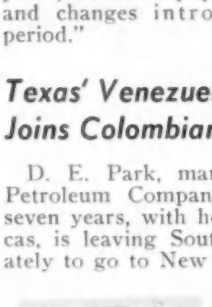
"'You rent me your wells for 25 years or more. We will install the equipment, technicians, ships, etc. We will undertake whatever changes and improvements are necessary. We also will make new explorations. You will name an interventor. We will observe your labor laws and the union standard of your workers, provided you guarantee the labor-management contract, which will be respected under your vigilance. You will receive a fixed percentage of liquid profits and we will return the wells to you after 25 years, with all equipment, improvements and changes introduced during that period."

No New Iraq Concessions

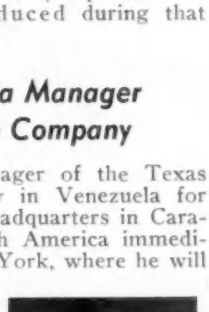
No new oil concessions have been granted by Iraq to Britain or France, according to Prince Abdul Illah, regent of Iraq, in consequence of his recent visit to those countries, although he discussed Iraq's oil with British and French statesmen. He made this statement September 17 at Ankara, where he was working toward solidifying relations between Iraq and Turkey.

Texas' Venezuela Manager Joins Colombian Company

D. E. Park, manager of the Texas Petroleum Company in Venezuela for seven years, with headquarters in Caracas, is leaving South America immediately to go to New York, where he will become vice president of the Colombian Petroleum Company.



D. E. Park



W. I. Woodson

He will be succeeded in Caracas by William I. Woodson, a member of the Texas Company organization for many years, who has been assistant manager in Venezuela under Park.

Park came to Venezuela from Colombia where he had been manager of the Colombian Petroleum Company's operations at the Barco Concession.

Phillips Completing First Venezuela Drilling Project

Phillips Petroleum Company is completing its first drilling operation in Venezuela after having applied for a concession less than a year ago. The first well is a core test on its El Travieso concession and locations have been staked for two more. The company must limit its operations for the time being, since it has only one rig which it acquired in Venezuela, and is awaiting arrival of complete equipment from the United States before it commences extensive development.

Production is expected, since it is bounded on two sides by producing concessions owned by Creole and Mene Grande Oil Company. A camp is now under construction, which is in the Santa Barbara area in the state of Monagas. Another camp is being built by the company in the Puerta la Cruz area, which will be its port of entry for supplies and equipment, and where its general warehouse will be situated.

Production in Venezuela Remains at High Level

Production of Venezuelan crude during the week ending September 3 was estimated at 934,000 barrels daily, a drop of only 31,000 barrels, or 3.2 percent from the high of 965,000 barrels daily reached during the week ending August 13.

While the cessation of wartime peak demands has at least temporarily halted the climb of the country's production toward the million barrels-a-day level, principal producers here do not anticipate that the decrease in demand will be either serious or permanent, and in fact are welcoming a respite from the need of continual development in proved areas which has caused a rather serious delay in exploratory drilling.

With new equipment expected from the United States, operators may be able to keep abreast of their drilling programs. Already some increase is apparent in the number of rigs operating, and at present there are 89 rigs engaged in development and wildcatting, in addition to three stratigraphic test rigs which are doing slim-hole prospecting. These slim-hole rigs do not include the light outfits being used strictly for core-drilling areas, of which there are several in operation.

Of the rigs running, 21 are being used on strictly wildcat wells, while 68 are drilling in proved producing localities. Sixty-four rigs are being used in Eastern Venezuela, 24 are drilling in Western Venezuela, while 1 is being run by Socony Vacuum Oil Company on a wildcat in the Barinas area.

Capacho Disappointing

Venezuela's newest oil fields, the Capacho field opened by Creole Petroleum Corporation in July of this year, has been somewhat disappointing on the strength of early developments. Since completion of the discovery for a small producer, two dry holes have been drilled.

Steamship Service Planned

Monthly steamship passenger service to Venezuela will be inaugurated in October by Lykes Brothers Steamship Lines, according to J. R. Aston, Houston manager for the West Indies-South American division.

The first trip will be made from Houston by the motor vessel, "Manrope Knot," which will put in at Puerto La Cruz, Guanta, La Guaira, Puerto Cabello and Maracaibo.

☆ Oklahoma

Okfuskee Test Opens Pools Near Okemah and Weleetka

Okfuskee wildcats opens pools near Okemah, Weleetka; pool found northwest of Velma area; gas-distillate well marks strike west of Edmond; Skelly wildcat gets oil show in Coal County.

Okfuskee County: Wood Oil Company opened a new Booch sand well north of the Blakeley pool and northeast of Okemah when Smith 1, SE SW NE 23-12n-10e, flowed 118 barrels of oil and 2½ million cubic feet of gas on initial 24-hour test. Booch sand was topped at 2498 feet and with pipe set at 2490 feet production was from open formation from 2490 to 2518 feet, total depth. The well was on a farmout block from Mid-Continent Petroleum Corporation and opens to development considerable acreage which has been overlooked in the county.

About 4½ miles west of Weleetka, Amerada Petroleum Corporation has a gas discovery at Barry 1, NE NE SW 23-10n-10e, estimated at 15 million cubic feet daily from Cromwell sand between 3157-63 feet. The geological feature is considered to be a small anticline and is not expected to cover much acreage. Sand porosity is reported good and the well probably will continue as a good producer.

Stephens County: Northwest of the Velma area, which produces from several sands, W. F. Turner's Reveire Estate 1, SE NW SE 10-1s-5w, has given Southern Oklahoma another pool. Topping saturated Pennsylvanian sand at 2068 feet and drilled to 2097 feet, total depth, the wildcat tested 78 barrels of 35-gravity oil on the pump in the first 24 hours. The discovery is along a trend which has been played heavily during the past 2 years with fair success.

Oklahoma County: Harper-Turner, Inc.'s Bailey 1, CSE NW 28-14n-2w, is a discovery about a mile west of Edmond. Completed in the Bartlesville sand between 5847-50 feet, the well tested about 2 million cubic feet of gas and 5 barrels of distillate in 24 hours. While the 1 well cannot furnish an indication of the area's importance, its location indicates it may develop an important pool. Bartlesville sand possibilities in the area are viewed favorably.

Coal County: Southwest of Coalgate and about 10 miles from the Centrahoma pool, Skelly Oil Company is drilling below 3600 feet in Mayer 1, SE SE NW 33-1n-10e, after reporting an oil show in a sand in the Pennsylvania section at 1560 feet. A drill-stem test recovered about 20 feet of mud showing some oil. The test is a rank wildcat and north of Atoka County where several failures have been reported. A success at the Skelly test would revive attention to an area where comparatively little drilling has been done.

West Edmond: Two dusters in Canadian County further defined the western limits of this 4-county pool and brought to 17 the total dry holes drilled in the big field to date. Failures included Sohio Petroleum Company's Wherry 1, CNE NE 2-14n-5w, abandoned at 7061 feet after tests in the Hunton and Prue sand failed, and H. J. Schmitz's Bearly 1, CSE SW 25-14n-5w, abandoned at 6875 feet after testing the Bartlesville sand, which showed a little oil, Sohio, second largest producer in the field, has now completed all of its active operations in that area. Canadian County reported a successful completion at Allied Oil Corporation's Kelly 1, CSE NW 12-14n-5w, completed as a 250-barrel daily pumper plus 45 barrels of water from basal Hunton lime at 7100-01 feet.

Garvin County: Continental Oil Company continues testing Butterly 1, NW SW SE 14-1n-1e, pool opener near the Butterly gas area. After bailing to 3900 feet operator was preparing to perforate from 3924-63 feet. It drilled to 4423 feet and set pipe at 4164 feet on top of the Arbuckle. It has been testing the Oil Creek sand which on drill-stem test from 3875-4077 feet recovered 1720 feet of oil. The well had oil shows in the Pennsylvanian at 2629-32 feet and pumped 250 barrels of oil daily from Arbuckle.

McClain County: Cities Service Oil Company continues testing Lawson 1, CSW NW 22-5n-4w, important new discovery in the North Lindsay pool and the deepest producer in Oklahoma. On a 3-hour test the well flowed 101 barrels of 46.8-gravity oil through 16/64-inch tubing choke. Flowing pressure was 2000 pounds and shut-in pressure 3275 pounds. Total depth is 10,995 feet in the Second Wilcox sand. Cities Service has petitioned for 80-acre spacing.

First Hugoton Gas Well Shut Down for "Overage"

The first well in the Oklahoma portion of the Guyman-Hugoton gas pool to be shut in for over-production is Phillips Petroleum Company's Republic 1, located in Sect. 36-1n-14ecm, Texas County. The well has been closed in since September 1 when over-production as of that date totaled more than 34 million feet of gas. Operators shut in the well under the basic ruling of the Oklahoma Corporation Commission which requires that wells be shut in when the overage output amounts to the total production allocation for three months.

Wells Completed in the United States in Week Ended Sept. 29, 1945

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second issue of each month. More detailed data on wildcats published in third issue of each month.

State or District	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS *Oil	Gas	Dry	Total	ALL COMPLETIONS: This Week	Last Week	Cumulative: This Year	Last Year
Alabama	....	....	....	....	....	....	1	....	1	2	2	....	28	29
Arizona	....	....	....	....	....	....	....	....	....	....	....	....	....	6
Arkansas	5	....	....	1	6	....	....	....	....	....	6	3	141	172
California	32	....	....	....	32	1	....	....	5	5	37	33	1,624	1,542
Colorado	6	....	....	....	6	....	....	....	2	2	8	....	29	20
Florida	....	....	....	....	....	....	....	....	....	....	....	....	12	1
Georgia	....	....	....	....	....	....	....	....	....	....	....	....	6	7
Illinois	35	....	1	7	43	1	3	....	8	11	54	29	1,373	1,470
Indiana	3	....	....	4	7	....	....	....	....	....	7	5	261	253
Iowa	....	....	....	....	....	....	....	....	....	....	....	....	1	2
Kansas	20	5	....	11	36	2	1	....	3	4	40	34	1,247	1,295
Kentucky	2	....	....	4	6	1	....	....	....	....	6	11	406	590
Louisiana	14	2	....	6	22	....	1	....	4	5	27	17	767	572
North Louisiana	8	2	....	2	12	....	1	....	3	4	16	4	300	204
South Louisiana	6	....	....	4	10	....	....	....	1	1	11	13	467	368
Michigan	....	....	....	....	....	....	....	....	6	6	6	16	563	495
Mississippi	7	....	....	....	7	....	....	....	1	1	8	12	287	147
Missouri	....	....	....	....	....	....	....	....	....	....	....	....	32	33
Montana	7	....	....	1	8	....	....	....	....	....	8	....	164	257
Nebraska	....	....	....	....	....	....	....	....	....	....	....	....	3	12
New Mexico	3	....	....	1	4	....	....	....	....	....	4	6	311	296
New York	15	....	10	....	25	....	....	....	....	....	25	25	841	942
North Carolina	....	....	....	....	....	....	....	....	....	....	....	....	1	....
Ohio	2	....	....	1	3	....	....	....	....	....	3	24	694	734
Oklahoma	27	5	....	8	40	....	1	....	6	7	47	57	1,772	1,356
Pennsylvania	28	6	15	1	50	....	....	....	....	....	50	54	2,163	2,301
Tennessee	....	....	....	....	....	....	....	....	....	....	....	....	2	9
Texas	77	20	1	30	128	....	2	2	25	29	157	151	5,447	4,567
E.Tex.Bor. Co.'s	....	....	....	....	....	....	....	....	....	....	....	8	76	24
E. Texas Field	....	....	....	....	....	....	....	....	....	....	....	....	....	3
Rest of E. Texas	1	....	....	....	1	....	....	....	1	1	2	7	167	215
North Texas	25	1	1	11	38	....	....	....	4	4	42	30	1,311	1,058
W. Central Tex.	6	3	....	2	11	....	....	....	2	2	13	7	363	308
West Texas	23	....	....	1	24	....	....	....	1	1	25	35	1,320	1,185
Tex. Panhandle	7	15	....	4	26	....	....	....	....	....	26	8	462	210
G. Coast, Upper	8	....	....	2	10	....	1	....	4	5	15	15	525	434
G. Coast, Lower	5	....	....	6	11	....	1	1	9	11	22	24	778	713
Southwest Texas	2	1	....	4	7	....	....	....	4	4	11	13	375	338
S. Central Tex.	....	....	....	....	....	....	....	1	....	1	1	4	70	79
Utah	....	....	....	....	....	....	....	....	....	....	....	....	....	1
West Virginia	1	11	....	4	16	....	....	....	....	....	16	24	602	715
Wyoming	4	....	....	....	4	....	....	....	....	....	4	....	116	128
Total U. S.	288	49	27	79	443	5	9	2	61	72	515	501	18,893	17,952

* Includes distillate wells. † Includes salt water disposal wells.

☆ Kansas

Clark County Given Gas Field by Rank Wildcat

Huge gasser opens Clark County pool; Marjorie area gets extension; Gulf completes big producer in Ryan pool; Hugoton citizens complete gas producer for town's needs.

Clark County: A rank wildcat miles from production is giving this southeastern Kansas county an important new gas field as Helmerich & Payne, Inc.'s Peter Estate 1, NW NW SE 3-31s-21w, was reported good for 100 million cubic feet of gas daily. The test is 5½ miles north of Lexington and about 50 miles northwest of the big Medicine Lodge gas pool in Barber County. Topping Mississippi lime at 5172 feet, drill-stem test was taken at 5174-90 feet, gas showing in 30 seconds and flowing through a 2-inch line an estimated 8-10 million cubic feet. Flow continued to increase and the well was shut in when the gas started to cut connections. Observers believe the well is good for 100 million cubic feet of gas daily, open flow. The wildcat is on a block of 3200 acres.

Barber County: J. M. Huber Corporation, which has registered a number of successes in recent months, gave the big Marjorie area a mile south extension at Clay 1-A, NW NE NW 33-30s-13w. The well flowed 80 barrels of oil in 12 hours from Maquoketa lime topped at 4563 feet. Production was through casing perforations between 4563-71 feet, total depth.

Rush County: Gulf Oil Corporation drew top potential of 2339 barrels of oil per day at Hagerman 2, SE NE SE 34-19s-16w, Ryan pool. Production is from Arbuckle lime at 3724 feet. The field is becoming one of the top producers in the state.

Stevens County: Hugoton owns a community gasser at Fee 1, NE SW SE 16-33s-37w, Hugoton gas field, and plans to supply its citizens with cheap gas. The well was completed for 22 million cubic feet daily after acid treatment at 2767 feet.

McPherson County: Sharon Drilling Company was rigging up standard tools at Rasmussen 1, NW NW NW 23-18s-1w, wildcat a mile southeast of the Paden pool. Mississippi lime was topped at 2784 feet and the chert at 2803 feet with a show of free oil from 2809-12 feet.

☆ New Mexico

Grayburg Line Strike Offset Yields Only Sulphur Water

Offset to Skelly's Grayburg lime well in the Penrose-Skelly field, Lea County, yields sulphur water.

Lea County: Amerada Petroleum Corporation's State 1-P-B yielded only sulphur water after reperforating at 3644-3692 feet in an effort to secure production from the Grayburg lime, following Skelly Oil Company's Grayburg lime discovery well in the Penrose-Skelly field. The State 1-P-B was plugged back to 3670 and was being reperforated from 3610-3668 feet.

Rowan Drilling Company's 1-B-15 Elliott, 15-22s-37e, Ellenburger test, recovered gas at the surface in 11 minutes after the tool was closed for 3 hours, from 5078-5160 feet. The drill pipe flowed oil and gas for 15 minutes and recovery was 19 stands of oil in the drill pipe. This showing was from the Holt zone. It is planned to drill to the Ellenburger.

Humble Oil & Refining Company's 1-B Leonard, ¼ mile north outpost to Federal 1, Ellenburger discovery, is conditioning the hole after running an electric log and a caliper survey, with the hole bottomed at 4230 feet.

Wildcat Activity: Wildcats drilling in New Mexico total 35, distributed as follows:

Chaves County, 4; DeBaca County, 3; Eddy County, 9; and Lea County 19.

☆ West Texas

Ellenburger Production in Devonian Strike Assured

Production from Ellenburger lime assured in Atlantic's University 1-A, Devonian discovery and pool opener in East Central Andrews County; Gaines County pool opener testing upper section of Devonian; wildcats show interesting progress.

Crane County: Interest in the West Texas district shifted again to The Atlantic Refining Company's University 1-A, Block 31, when a drill-stem test indicated certain production from Ellenburger. The test was taken from 10,377-10,427 feet, and recovery of oil was sufficient to promise a good well. The test was made with a 5000-foot water blanket. After pulling 750 feet of drill pipe, recovery of the water blanket was started and water and mud were recovered for 6 minutes. After pulling 1530 more feet of drill pipe, more water was unloaded for 10 minutes, and oil for 45 minutes. Oil was unloaded at intervals while pulling 4950 more feet of drill pipe, and 210 feet of oil and gas-cut mud were recovered. It was estimated that the drill pipe filled with oil at the rate of from 60 to 65 barrels per hour, and the fill-up was 4555 feet of fluid. The well headed several times during the pulling of the pipe and there was a strong, steady blow of air throughout the test.

Location is the center of the northeast of the southeast 33-31, University, approximately 6 miles west of the north end of the McElroy field where production is from the Grayburg section of the Permian lime at approximately 2800 feet. The Crossett field is about 25 miles southeast, first Devonian field where production is from 5200 to 5466 feet. Top of the Ellenburger in University 1-A is 10,291 feet. Total depth of the hole is 10,427 feet. Production had already been assured in the Devonian lime, and the well may be completed as a dual producer. Atlantic has 9 other wells drilling in Block 31, and with the Ellenburger lime showing as productive, these tests undoubtedly will be carried to depths comparable with University 1-A.

Cost of completing a well of this depth may run as high as $300,000, and $250,000 is the lowest figure possible under the conditions, and in this area.

Gaines County: Amerada Petroleum Corporation was testing a higher section of the Devonian lime in its new discovery well, Jones 1-A, which recently opened a new field in the northwestern part of the county. A bridge plug was set at 11,288 feet and perforations made at 11,268-84 feet with 96 shots. Tubing packer was set and the well acidized with 1000 gallons. Swabbing was in progress when the packer gave way before any conclusive recovery of oil was made, but between 4 and 5 barrels per hour were estimated. Preparations were being made to reset the packer and swab again. A previous test in the Devonian, at 11,380-420 feet, yielded 900 barrels of sweet oil in 12 hours. Flowing production in this well is probable from the 9000-foot Basal Permian, giving a dual producer.

Andrews County: Humble Oil & Refining Company's Means 88-X, deep test in the Means district, was drilling lime below 13,589 feet. A drill-stem test from 13,228-13,401 feet, with a 5000-foot water blanket, open 2 hours, recovered the water blanket and 7771 feet of sulphur water, with no shows of gas or oil. Top of the Silurian was given as 13,330 feet.

Shell and The Texas Company's Ratliff & Bedford 1, Ellenburger test in southwestern Andrews County, was testing the Devonian, and indications are that 4 producing zones may yield oil. Total depth of the hole is 11,469 feet. Perforations were made at 8777-8850 feet with 507 shots. Packer was set at 8759 feet and the well treated with 500 gallons of acid. Flow was estimated at 22 barrels of oil in 2 hours with a gas-oil ratio of 2600. The well was then retreated with 1000 gallons of acid and the flow of oil increased to 25 barrels in 3 hours, with approximately 8 percent of air mud.

Crockett County: Moore Exploration Company's Halff-Bevins 1, wildcat in the western part of the county, was drilling lime below 3655 feet. A showing of oil was encountered at 3620-26 feet and at 3626-36 feet, and a core recovered 7½ feet of lime bleeding oil.

Ector County: Sinclair Prairie Oil Company's Williamson 1, 10,500-foot test, proposed extension to the TXL field, swabbed 40 barrels of oil on the first 16-hour test, and 17 barrels on the second 24-hour test at 9923 feet. The well was acidized with 2000 gallons and was preparing to swab again.

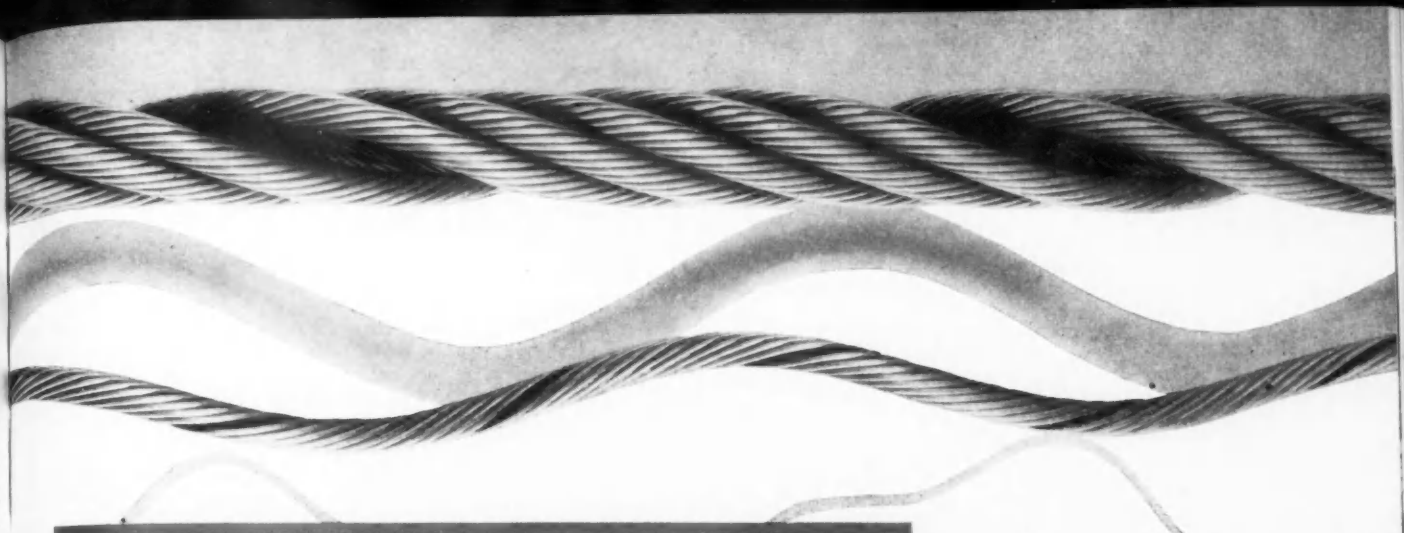
Stanolind Oil and Gas Company's Scharbauer 1 recovered 295 feet of oil and gas-cut mud on a drill-stem test from 7969-8011 feet. A second test from 7499-8059 recovered drilling mud with no shows of gas or oil reported.

On the east side of the TXL field, Texas 1-D TXL recovered 310 feet of oil and gas-cut drilling mud with a small amount of free oil on top, from a drill-stem test at 8506-8588 feet.

Midland County: Humble's Mrs. Buchanan 1, wildcat, swabbed at 4000 feet after plugging back to 11,704 feet. A slight show of gas was reported and the well was treated with 1000 gallons of acid from 11,380-11,430 feet. The well was then swabbed to 6500 feet, and reported a slight show of gas. Perforation was at 11,430-11,515 feet, and there was no estimate of the gas volume.

Pecos County: R. M. Payne abandoned H. C. McClain et al 1 at 3744 feet after plugging back from 5322 feet. After acidizing with 2000 gallons, the well flowed sulphur water. The well was located in Sect. 7, Block 2, H&TC Survey, and was a test to the Ellenburger.

Reeves County: Argo Oil Corporation's Dora Roberts 1, encountered salt water from 5377-5378 feet. Total depth is 5382 feet, and preparations were be-



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ing made to deepen, probably to 10,000 feet. Location is 13 miles northeast of Balmorhea, in Sect. 294, Block 13, H&GN Survey.

New Wildcats: Wildcats started in West Texas during the week included Humble's N. M. Tucker et al 1, 660 feet from the southeast and 4620 feet from the northeast lines of Sect. 23, Block 1, H&TC Survey, in Crane County, a 6500-foot Simpson test. The test is 1½ miles north of Abell. Addison Drilling Company's A. C. Hoover 1, is to be a 2200-foot Clear Fork test, 6 miles south of the Shannon pool, in Sect. 1, Block FFB&B, Crane County. Shell Oil Corporation's Tankersley 3, is to be a test to the Ellenburger, 8500 feet if necessary, in Sect. 10, GC&SF Survey, Irion County. Livermore's Krause 1, 12 miles southwest of Floydada, Floyd County, is to test the Clear Fork, with contract to 6000 feet.

☆ West Central Texas

Southern Haskell County Wildcat Has Good Showing

Southern Haskell County gets good show in wildcat; 2 wildcat failures reported; routine completions small in output.

Coleman County: L. H. Choate's W. A. Powell 1, M. and D. J. Trevino survey, was abandoned in shale and sand at 2396 feet, after failing to make any shows.

Runnels County: Callihan & Blakley's Jennings 1, E. Morris survey, was abandoned in sand at 3120 feet.

Haskell County: Edward C. Lawson's No. 2 C. C. Rose "B" appears to be good as a producer in the Canyon lime reef, from 2768 feet. Top of the lime was reported at 2755 feet, with oil showing from 2760-2768 feet. An electric log was run and 5½-inch casing set at 2764 feet. The well was cemented with 100 sacks. When the plug was drilled, gas blew the tools up into the casing. Bailing showed 800 feet of fluid in the hole, and later the hole filled up and flowed 50 barrels of fluid with a good show of oil and gas in 1 hour and 55 minutes. The test is 4100 feet from the south line and 2970 feet from the east line of the J. McCase survey No. 57.

Two offsets have been staked by Lawson.

Committee to Arrange Gas Session in Dallas Named

A committee has been named by President Edward Buddrus to make arrangements for the annual membership meeting of the Independent Natural Gas Association in Dallas November 26, the day before the FPC gas hearings open there. On the committee are William H. Wildes, C. H. Zachry, John A. Ferguson and Charles L. Orr. The program will be arranged by D. A. Hulcy, Clyde H. Alexander, N. R. Royall, Jr., and Ferguson.

Named to nominate directors to fill vacancies on the directorate and to make recommendations to the board regarding election of officers are Burt R. Bay, Joseph Bowes, Wildes, J. H. Dunn, B. A. Hardey and Frank Buttram.

☆ North Texas

Test Indicates Probable Hildreth Pool Extension

Probable Hildreth pool extension indicated by Venmex Oil Company's Kingsbury 1; Grayson County wildcat test fails; Sivell's Bend area active.

Montague County: Favorable results on a drill-stem test of Kingsbury 1, Hildreth pool extension test, indicate the well will make a producer. Venmex Oil Company tested the conglomerate zone at 6045-66 feet late in the week, and the well showed gas in 3 minutes, and flowed oil in 13 minutes, recovery not reported. The well then was drilled to 6124 feet and preparation was being made for another drill-stem test from 6115-24 feet. In the B. Anibal survey, this test, if successfully completed, will extend the Hildreth area approximately 1 mile northwest. Bend conglomerate, the section from which the drill-stem test was made, is among the highest conglomerate pays found in the North Texas area.

Other tests in the district include A. R. Dillard's Lawson 1, N. Kimbro survey, about 1½ miles northwest of the Venmex well. Bottomed at 6012 feet, this well had a drill-stem test late in the week and showed gas in 2 minutes and reported an oil show of considerable extent.

The Venmex and Dillard wells are between the Hildreth pool and W. B. Omohundro and Continental Oil Company's Johnson 1, Block 6, Limestone County School Lands, which accounted for a Bend conglomerate pool a short time ago.

Wichita County: Consolidated Oil Company's Jones & Payne 5, BBB&C Railroad survey, flowed an estimated 50 barrels per hour for 3 hours on a test at 4176-4217 feet, and was reported shut in for storage.

Cooke County: In the Sivell's Bend area, Sun Oil Company's Kate Allen 1 was coring at 6868 feet and preparing to make its fourth drill-stem test. Seated at 6985 feet, the well cored sand from 6950-6988, with the lower part of the sand showing oil.

In the same area Magnolia Petroleum Company's Dillard 1, already completed as a producer, was testing the Kobe pumping unit installed last week. Magnolia's Bush Brothers 1 was drilling in shale below 5477 feet, and Standard Oil Company of Texas Beasley 1 was reaming in shale at 2370 feet. Cox & Hamon's Davis 1 was drilling in shale below 5755 feet.

Grayson County: After running an electric log, Seitz, Comegys & Seitz's Graham 1 was abandoned at 4375 feet, with no shows reported. This test was about 3½ miles southeast of Collinsville, in the C. E. Findleman survey. Contract depth was 5000 feet.

Jack County: Stephens Petroleum Company has staked a wildcat in southeastern Jack County, 1181 feet from north and 1267 feet from the west lines of Sect. 1, WCRR survey, 3 miles northwest of Joplin. This location is approximately 3 miles east of the Cherry Holmes Bend conglomerate pool, and approximately 4 miles northwest of the McAnally pool.

Archer County: G. J. Scholl et al have located a 4800-foot rotary test in Richardson 1, 330 feet from the south line and 330 feet from the west line of Lot 22-A, Jonathan Scott survey.

Cooke County: Norwood & Anderson have spudded M. W. Thompson 1, wildcat 330 feet from the south line and 330 feet from the east line of the Thompson 90-acre tract in the north half of the T. Bell survey.

King County: Roy H. Lebus et al's W. R. Ross 1 is to be a 6500-foot rotary test, 330 feet from the south and east lines, Sect. 89, Block A, J. B. Rector survey.

☆ East Texas

Freestone County Wildcat Shows Gas and Condensate

Texas Company wildcat in Freestone County shows gas and small amount of condensate; Wood County wildcat also makes slight show.

Freestone County: The Texas Company's Mrs. N. Ham 1, wildcat, flowed 1,500,000 cubic feet of gas on a 24-hour test with 22 gallons of condensate and brackish water per hour, with packer set at 7947 feet, and perforations at 8002-18 feet. Total depth is 8537 feet.

Smith County: Phillips A. Englander was reported drilling at 12,615 feet.

Sinclair Prairie Oil Company's Shofner 1, Dickerson survey, was drilling in lime and shale at 13,050 feet.

Wood County: Magnolia Petroleum Company's Malone-Taylor 1 was testing after plugging back from 8802 feet to 8775 feet. Perforation was at 8747-54 with 28 shots and at 8758-70 feet with 48 shots. After tubing was run the well was washed and cleaned but failed to flow. After 8 hours of swabbing, a slight show of gas was recovered, but no oil was reported.

☆ East Texas Border

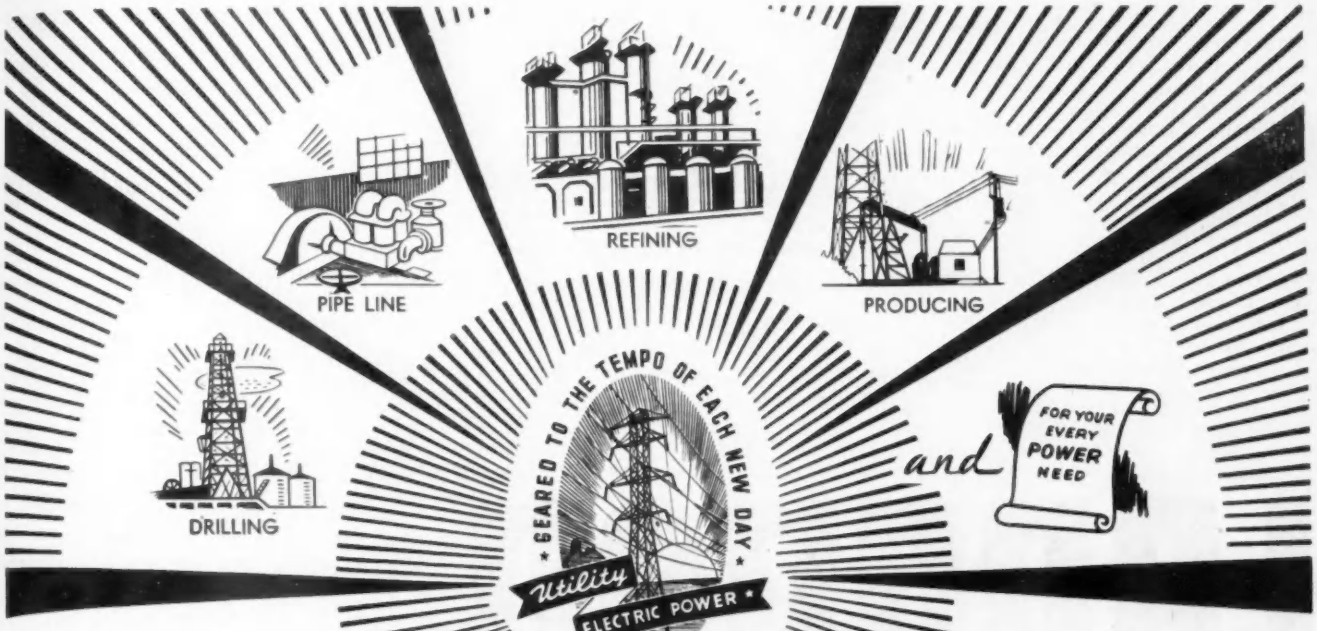
San Augustine and Shelby County Wildcats Testing

Wildcats in San Augustine and Shelby counties still testing; Sun Oil Company fails to make oil production in Carthage field.

San Augustine County: M. E. Davis' C. Thomas 1, wildcat in the Wm. B. Horn survey, swabbed down to 8300 feet and recovered drilling fluid, acid and a slight amount of oil and gas. Perforations were made from 9075-95 feet in the Travis Peak and acidized. Earlier, crews swabbed 8 barrels of 41-gravity oil and 28 barrels of acid water in 12 hours. Crews are now pulling packer to recover swab and preparing to re-acidize.

Shelby County: Humble Oil & Refining Company's wildcat, Pickering Lumber Company 1, St. Francois survey, is circulating mud on bottom at total depth of 10,986 feet in the basal Cotton Valley where well started kicking gas and returns were lost.

M. E. Davis' (J. C. Benedum) Pickering Lumber Company 1, W. J. Brittain survey, has not effectively squeezed any of the 6 intervals which were perforated. Recent perforations on bottom at 5740



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feet when tested flowed gas, salt water and traces of oil through 3/16-inch choke. Operators are preparing to squeeze off and perforate from 5780-95 feet.

Panola County: Sun Oil Company failed to get commercial oil production in Sallie J. Neal 1-A, J. R. Garner survey, Carthage field, which earlier seemed likely to open oil production there. The well was treated with 1000 gallons of acid in the Bacon lime and recovered 400 feet of gas-cut mud and 2600 feet of acid water.

Harrison County: Rogers Lacy is preparing to spud at Hayman Estate 1, E. Talley survey, proposed 6500-foot wildcat 2½ miles west of Marshall.

Lacy is reconditioning hole in Verhalen Nursery Company 1, Aaron Poe survey, at total depth of 6728 feet.

Stanolind Oil & Gas Company cemented casing at 3000 feet in Hattie Cole 1, Charles Taylor survey, wildcat in the Rosborough Springs area, and is drilling below 3854 feet in shale. Blossom was topped at 2365 feet by samples.

☆ South Central Texas

Cistern Wildcat Abandoned; Imogene Wells Are Tested

Continental abandons Cistern wildcat; Imogene wells testing; Dimmit and Edwards wildcats report show of oil.

Bastrop County: Attempts to open new oil production north of Cistern failed with the abandonment of Continental Oil Company's Frank Rundus 1, Medford League, at a total depth of 4344 feet.

In this same area, Continental's Malina 1 was delayed with a fishing job at 7956 feet.

Atascosa County: A test has been staked in the Charlotte field by the Humble Oil & Refining Company. It is the A. K. McBride 2, Antonio Estrada survey 53.

In the Imogene field, Humble's Avant 1, Galba Fuqua survey, has casing set at 7591 feet for completion. The Thompson 1-B was swabbing at 7578 feet.

Bexar County: H. A. Pagenkopf's Max Blum 1, deep test in the Gas Ridge field, was drilling below 4500 feet in shale on a 5000-foot contract.

Dimmit County: Humble's H. S. Davis 1, T&NO survey, deep wildcat near Carrizo Springs, was drilling in lime at 6987 feet. This wildcat logged sand with an oil odor at 2720-32 feet but recovered salt water on a drill-stem test.

Edwards County: Interest is centered on Dan Auld's Peterson 1, wildcat 6 miles northeast of Rock Springs. After setting 7-inch casing at 3500 feet, operator is drilling deeper below 3700 feet in shale. A sand showing some oil was reported logged at 1655-70 feet.

☆ Southwest Texas

Activity in Garcia Field, Starr County, Increases

Garcia field activity soars; Hiawatha continues development program in Southland field; Zapata County wildcat test is failure.

Starr County: Activity in the Garcia field continues to increase. Coastal Refineries, Inc.'s Basilio Solis has been dually completed. The well flowed 90 barrels of 45.7-gravity oil daily through a ⅛-inch choke from perforations at 4284-88 feet and made gas from an upper sand at 3145-50 feet.

In the same field, Sun Oil Company has staked M. M. Garcia 4-L as an offset to Longeria 2.

Duval County: Hiawatha Oil & Gas Company continues widespread development of the Longhorn field. The company's Southland Life Insurance Company 39 flowed 111 barrels of 42-gravity oil, plus 48 percent water, daily from 3987½-90½ feet. Location has been staked by the company for the Southland 40.

In the Strake field, Santa Clara Oil Company's John O. Yates 1-A has spudded and set surface casing.

Zapata County: Navillus Oil Well Servicing Company's Martiniano Garza Estate 1, wildcat 4 miles south of Escobas, Block 76, has been abandoned at 2707 feet.

☆ Lower Texas Coast

New Hockley Sand Field Is Opened in Bee County

Discoveries indicated in Bee County; wildcat drilling campaign in San Patricio County soars; Magnolia to test Goliad County wildcat; Sarco Creek field extended.

Bee County: A new Hockley sand oil field has been opened 16 miles northwest of Beeville with Tom Graham's

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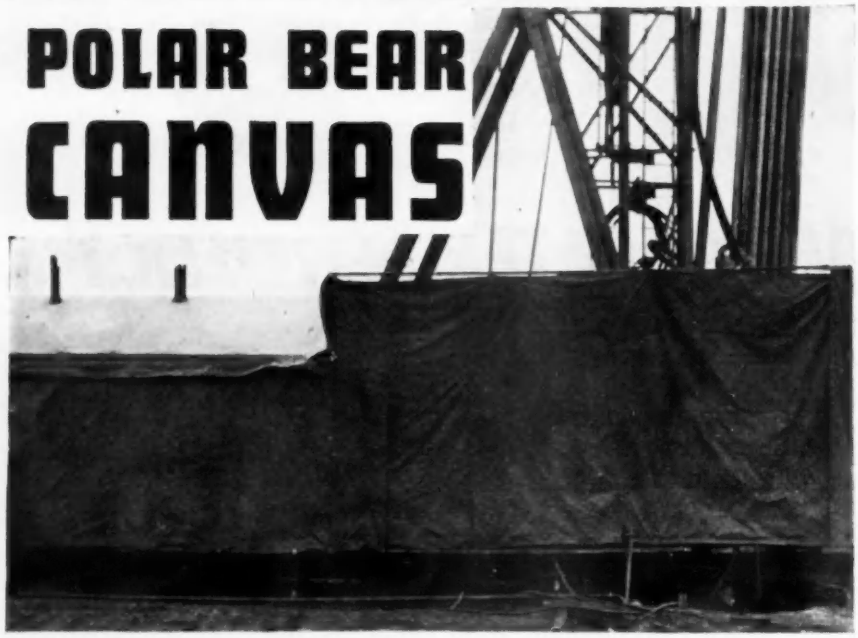

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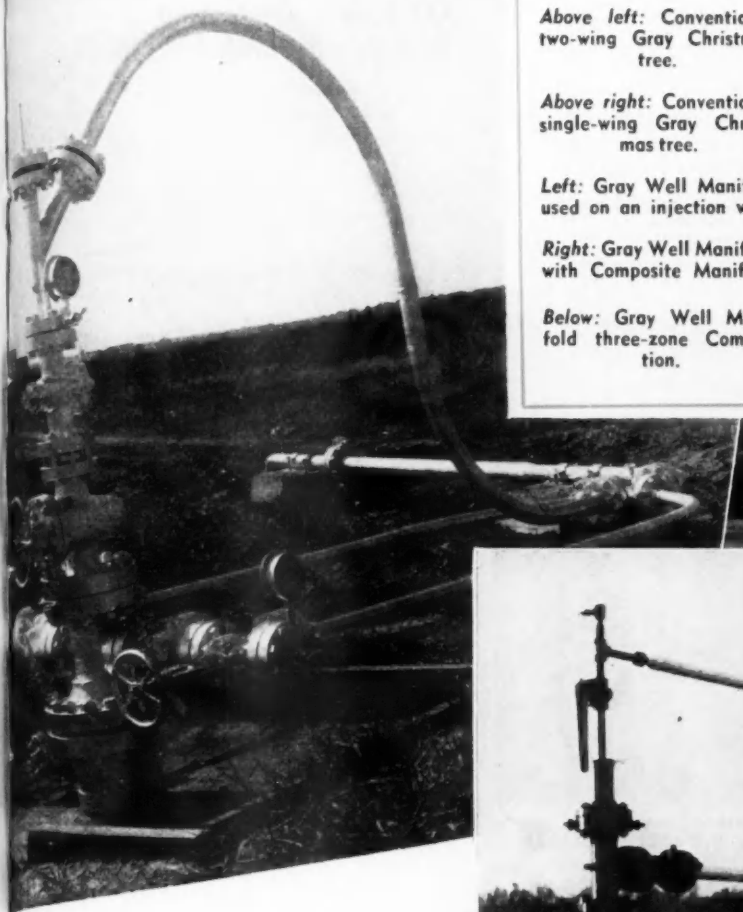

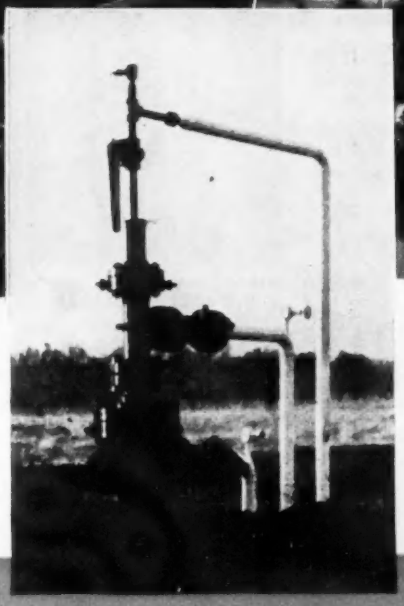

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Theis 1, R. S. Barnes survey, flowing oil into tanks without a gauge from perforations at 3573-82 feet. Oil sand was logged at 3571-79 feet and 5½-inch casing set on bottom at 3587 feet.

About 10 miles west of Refugio, S. Chamberlain's H. C. Wood 1, wildcat in the Jose Maria Castillo survey, has 5½-inch casing set at 5306 feet and is perforating around 5230 feet for a completion attempt.

San Patricio County: Wildcat drilling activity in this county is being boosted weekly. Two wildcats were staked during the week.

Rowan & Hope spotted a test 3 miles north of Edroy in the Welder Ranch subdivision of Sect. 48.

About 7 miles west of Sinton, Tom Graham will drill R. Morgan 1, Stockton survey.

Goliad County: Magnolia Petroleum Company's R. F. Irby 1, wildcat 12 miles southwest of Goliad, drilled to 11,726 feet and is plugging back to test just below 10,000 feet.

Transwestern and Continental's L. A. Straube 1 has been abandoned at 7613 feet, apparently defining the Slick-Wilcox sand pool to the south.

Ginther, Warren and Ginther's Carrie G. Wood 3, northeast of the gas discovery in the Sarco Creek field, developed 600 pounds pressure on a 6-minute drill-stem test at 4148-60 feet and is drilling deeper to test the Vicksburg sand.

Karnes County: Southern Minerals Corporation is preparing to drill a 6200-foot wildcat 1½ miles east of Gillett.

Jim Wells County: Slick Oil Company's R. R. Mullen 1, wildcat 3 miles south of Alice, has been abandoned at 5559 feet.

☆ Upper Texas Coast

Rodessa May Be Tested by Wildcat in Trinity County

Trinity County wildcat may test Rodessa; Wilcox test in Austin County waiting on orders; deeper sand sought on north flank of Boling dome; final gauge reported on Colorado County discovery.

Trinity County: Magnolia Petroleum Company's Bolton 2, deep wildcat in the Glendale area and near Navarro Oil Company's Bolton 1 dry hole, found the Woodbine sand section thin and at 10,300 feet was through the horizon. Only a small amount of sand was logged and this sand carried very little or no porosity. The test is being carried deeper with the hope of picking up the Rodessa section below 11,000 feet.

Austin County: Union Producing Company's John E. Hintz 1-A, wildcat in the Sealy area, is bottomed at 9014 feet and is waiting on orders. A drill-stem test at 8808-29 feet in the Wilcox formation recovered salt water.

Newton County: Humble Oil & Refining Company's W. W. Moore Jr. 1, wildcat 2 miles southwest of Bon Wier, was bottomed at 10,174 feet and taking sidewall samples. No shows have been reported.

The company's Hankamer 1, South Call area, was drilling below 7500 feet in shale.

Wharton County: Union Oil Company of California's Hawes Estate 2, south of the discovery well on the north flank of Boling dome, was setting liner to total depth of 5256 feet to test a deeper sand. The discovery was completed above 5000 feet.

Harris County: Humble's Milo 10, Tomball field, deepest active test on the Upper Texas Coast, was delayed with stuck drill pipe at 13,090 feet.

Colorado County: An official gauge has been made at Cities Service Oil Company's John Schobal 1, oil discovery well northeast of the gas-condensate producer in the Columbus field. It flowed 124 barrels of 36.5-gravity oil daily through a ¼-inch choke from perforations at 7857-59 feet in the Wilcox. Tubing pressure was 1300 pounds and casing pressure 1075 pounds with the gas-oil ratio being 11,000/1. Total depth is 9752 feet with gas and condensate production indicated on tests between 8100-8800 feet.

In the Chesterville area, Sun Oil Company's Tulane Gordon 1, GH&H survey, flowed 80.39 barrels of 37.1-gravity oil through a ⅜-inch choke on gas lift. Perforations were at 6073-80 feet.

Magnolia Petroleum Company's Chesterville Unit 3, at Chesterville, logged gas sand in the Cockfield at 6478-98 feet and is drilling below 6890 feet in shale.

Oil Scouts Association Planning Expanded Work

New officers of National Oil Scouts and Landmen's Association will meet at the headquarters in Austin, Texas, early in October, for their first meeting when they will endeavor to pick up the Association's work and make special plans for an expansion program.

☆ South Louisiana

Avery Island Field Test Opens New Shallow Sand

New sand opened at Avery Island; large dual-sand oiler completed at Pine Prairie; Cameron Parish wildcat testing; Magnolia to drill deep test in Beauregard Parish.

Iberia Parish: A new shallow sand apparently has been uncovered in the Avery Island field with completion of Humble Oil & Refining Company's Petit Anse Company 7-B, 23-13s-5e. Perforated at 8648-65 feet, the well flowed 365 barrels of 34.7-gravity oil daily through a 10/64-inch choke. Gas-oil ratio was 800/1. The regular sand at Avery Island is at 8900 feet with some wells completed at a deeper horizon.

Evangeline Parish: Pan American Production Company has made a dual sand completion at Crowell Land and Mineral Corporation 6, 2-4s-1w, Pine Prairie field. The well flowed 500 barrels of oil daily through a ¼-inch choke from the upper sand at 7975-8000 feet. Perforated in the lower sand at 8760-8820 feet, the well flowed 803 barrels of oil daily through an 18/64-inch choke.

Cameron Parish: Continental Oil Company and Yegua Corporation's Dobbertine 2, 9-15s-14w, wildcat in the Johnson Bayou area, was reperforating for a completion attempt after squeezing perforations at 9050-56 feet. This test was drilled to 13,005 feet.

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Sulphur Company are erecting derrick for Ira Hebert 1, wildcat in the Sweetlake area, 31-12s-7w.

Jeff Davis Parish: Final completion has been made at Stanolind Oil & Gas Company's W. H. Tupper 1-B, 28-7s-3w, South Elton field. Perforated at 8991-9001 feet, the well flowed 465,000 cubic feet of gas daily along with 32 barrels of condensate through a ⅛-inch choke. Tubing pressure was 2600 pounds and casing pressure 2718 pounds.

Iberville Parish: Humble's Wilbert Mineral Corporation B-6, outpost in the Bayou des Glaise field, has 7-inch casing set on bottom at 10,090 feet.

Beauregard Parish: Magnolia Petroleum Company has made location for a 10,000-foot wildcat test in the southern part of the parish. It is the M. J. Witzki 1, 22-6s-11w.

Jefferson Parish: The Texas Company's State 1, East Barataria Bay, deepest active test on the Louisiana coast, was drilling below 13,750 feet in hard shale.

☆North Louisiana

Lincoln Parish Is Given New Gas-Distillate Field

Gas-distillate field opened in Lincoln Parish; Big Creek field given extension; 3 wildcats staked in Bossier, East Carroll and Natchitoches parishes.

Lincoln Parish: The California Company opened a gas-distillate producing area at M. H. Nobles et al 1, 12-19n-4w, on the Hico prospect. The well was perforated with 300 shots from 8705-52 feet in Bodcaw sand, and flowed 145 barrels of 55-gravity distillate per day through ¼-inch choke on tubing. Later it flowed 195 barrels per day through 3/16-inch and ¼-inch chokes with tubing pressure on ¼-inch choke of 3295 pounds. The well is shut in under 3500 pounds pressure at 8760 feet, plugged-back total depth. It is to be perforated in another section of the Cotton Valley before being officially completed. It has also been reported that showing of oil was logged in the Travis Peak, which will not be tested now.

California is moving rig to Mary Lou Carver 1, C SW SW 11-19n-4w, 1 mile west of the discovery well, which also will seek Cotton Valley production.

California has started running 7-inch production casing to complete W. W. Norris 1, 13-18n-1w, second test in the Tremont field. The well is 9 feet lower on structure than the discovery but has logged good saturation and is assured of production.

Richland Parish: The Big Creek field was extended ⅜ mile south and ¾ mile west with completion of Bering Oil Company's R. W. Price 1, 5-16n-8e. Production was through perforations from 2923-37 feet, and the well gauged 199 barrels of 40-gravity oil on official 24-hour test. Flowing casing pressure was 1100 pounds and tubing pressure 425 pounds. Total depth is 3100 feet with string of 5½-inch casing cemented at 2988 feet.

R. J. Caraway has requested permit to drill Bryant 2, SE NW 35-17n-8e, as a twin well to his field opener, Bryant 1, between the Delhi and Big Creek fields. This will be the first twin test in the area if permit is granted. The discovery well was completed from the Holt sand and the twin well will seek May sand production.

Pat Marr has applied for permit to drill H. M. Evans 1, C SW NW 35-17n-8e, a west offset to Bryan 1.

Bossier Parish: Barnsdall Oil Company and Sohio Petroleum Company have cemented 7-inch casing at 9300 feet in Padgett-Bundy 1, C NW SE 17-20n-12w, preparatory to perforating in Cotton Valley sands. The well is due to extend Benton field production southeast. Total depth is 9307 feet.

Barnsdall, Sohio and the Continental Oil Company have staked a Cotton Valley wildcat test in the Ivan area, Crystal Refining Company 1, C SE SW 29-21n-11w.

G. H. Vaughn's Katie Odom Padgett 1, C SW NE 1-20n-12w, 1½ miles northwest of the Benton discovery, is drilling below 7488 feet in shale and just above the Cotton Valley horizon.

Claiborne Parish: H. C. Owens' Thomas Crichton 1, NE 1-20n-8w, is delayed by a fishing job at 4620 feet, total depth 6770 feet.

Delta Drilling Company and M. J. Houston's E. K. Gladney 1, is drilling below 6650 feet toward 7500-foot contract depth after running electric log at 6542 feet. Gloyd porosity was logged at 4826 feet; Travis Peak topped at 5705 feet.

De Soto Parish: Kerlyn Oil Company's Frost Lumber Company 1, C NE SW 7-11n-12w, is drilling below 2305 feet in shale.

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pen 1, C NW SW 29-12n-11w, wildcat in the Bull Bayou area, is below 3570 feet in shale.

Caddo Parish: United Carbon Company's T. R. Grayson Lumber Company 1, 30-19n-15w, after running electrical survey, is stringing 5½-inch casing to complete at total depth of 6160 feet.

Ouachita Parish: California's Walter Maxey 1, 32-18n-1e, wildcat reported to have logged Travis Peak showings, is drilling below 8820 feet.

East Carroll Parish: McAlester Fuel Company's Robert Pettyfoot 1, C SE NE 11-20n-12e, is staked as a new wildcat deep test.

Natchitoches Parish: The California Company has applied for permit to drill W. S. Lee 1, 18-13n-7w, as a 3500-foot test in the Ashland area.

☆ Arkansas

Four New Tests Seeking Pay in Shallow Horizons

Wildcat activity increasing with 4 new tests staked, seeking production from shallow horizons.

Lafayette County: The McKamie-Patton gas-distillate field reports increasing activity, with 3 new tests seeking oil production from the same horizon as Barnsdall Oil Company and Sohio Petroleum Company's Moore Heirs 1, C NW SE 32-17s-24w, which flowed 518 barrels of 44.8-gravity oil through ¼-inch choke on tubing from the Smackover lime to give the area its first oil production.

Grady H. Vaughn's Moore 1, C NW 34-17s-24w, is one of the tests staked, and may prove the link between the McKamie and Patton sectors.

Miller County: Barnsdall's W. S. Nichols 1, C NE NW 20-18s-28w, was waiting on cement at 8000 feet after recementing surface casing. Travis Peak was topped at 6753 feet. No showings of commercial production have been encountered.

G. Anthony et al are moving in at A. W. Smith 1, NWc SE 24-15s-26w, 3 miles northeast of the Garland City field's Paluxy production. The location was selected on the basis of subsurface geology, and is in an area of dry holes which has non-commercial showings of oil.

Skelly Oil Company's W. Smith 1, SW SE 28-16s-26w, has started work. It is the fourth test in the Fouke field. The field has 1 producer, 1 dry hole, and a test waiting on workover rig.

Calhoun County: R. H. Crow is starting operations at Stout Lumber Company 1, C SE SE NW 26-14s-14w, 1¾ miles north of the 1-well Hampton field's Meakin producer at 2514 feet. Location is also 2½ miles east of a 4959-foot dry hole.

J. T. O'Neil is expected to abandon H. B. Gaughn 2, C NW SE NW 22-14s-16w, at 4510 feet.

Logan County: M. J. Reinhart's B. Nagle 1, C NE NE 11-8n-24w, Ft. Smith area, will test the Pennsylvanian formations for gas production.

Ouachita County: J. Carnes has located Reynolds & Sifford 1, SE NW 8-14s-16w, 2 miles southwest of Skelly's Gaughan 1, a dry Smackover test which was high on structure. Nearest production is the Smackover field, 8 miles south.

White County: Lion Oil Refining Company's Nalley 1, SE NE 33-8n-7w, wildcat, is drilling below 5351 feet.

☆ Mississippi

Prospect in Adams County Reports Encouraging Shows

Adams County prospect reports encouraging shows; 5 new producers noted for Langsdale field; Claiborne County well resumes operations; Hinds County prospect abandoned.

Adams County: Charles H. Osmond's Armstrong-Ellislie 1, NEc 31-5n-2w, 15 miles southeast of Natchez, is reported to have gas shows from the Massive sand below 11,000 feet. Casing has been set to that depth and Osmond is making preparation for a production test early next week. Cores taken from 11,035-72 feet tested fair shows of gas as well as those at 11,105-195 feet.

Clarke County: Kirby Petroleum Company completed 5 good producers in the Langsdale field, near the Alabama line. Long Bell Petroleum Company A-3, NW NW SE 25-1n-17e, was brought in with an initial production of 120 barrels of oil per day. Gravity of the oil was 20.2 with production coming from several sections of the Eutaw. Kirby's Long Bell Petroleum Company A-4, NW NE SW 25-1n-17e, also was completed with initial production of 65 barrels of oil per day. The company's Long Bell Petroleum Company B-2, C-3, and E-1, all in

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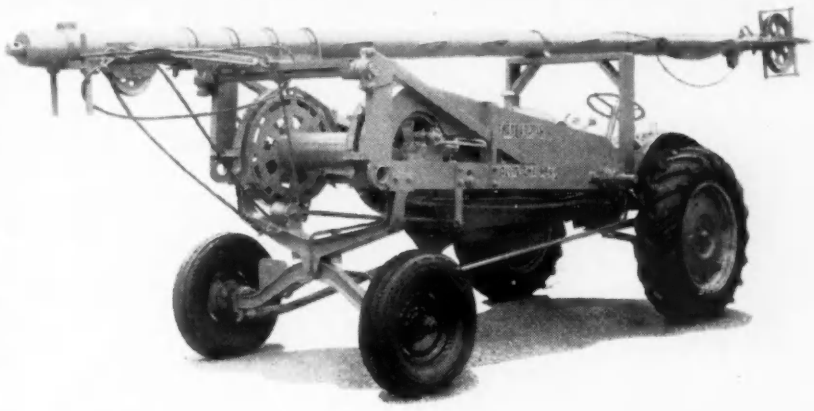

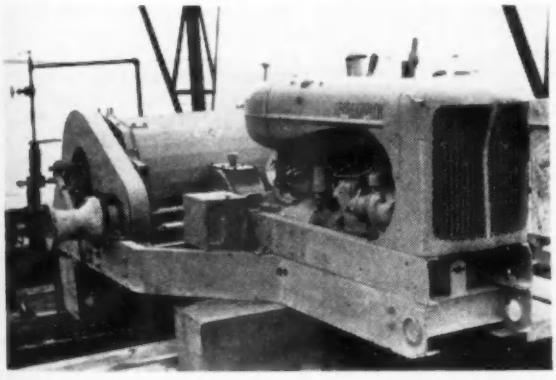

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Prepared under the Direction of the Committee on Tectonics, Division of Geology and Geography, National Research Council.
Chester R. Longwell, Chairman, Philip B. King, Vice-Chairman.
Charles H. Behre, Walter H. Bucher, Eugene Callaghan, D. F. Hewett, G. Marshall Kay, Eleanora B. Knopf, A. I. Levorsen, T. S. Lovering, George R. Mansfield, Watson H. Monroe, J. T. Pardee, Ralph D. Reed, George W. Stose, W. T. Thom, Jr., A. C. Waters, Eldred D. Wilson, A. O. Woodford.

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30-1n-18e, also made good commercial production on their initial efforts. Two other Kirby Long Bell wells in this section are installing pump preparatory to completion. L. J. Rousell's Long Bell Lumber Company 3, wildcat, C NW NW 14-2n-16e, remains shut down for orders after running tubing and rods with the well bottomed at 4205 feet. Shows of heavy black oil and quantities of salt water had been recovered in tests of the Eutaw below 3700 feet. L. J. Rousell's Long Bell Petroleum Company 1, wildcat, SE SW 10-2n-16e, is waiting on casing after reaching 3808 feet in the Eutaw. No shows had been reported.

Claiborne County: Sun Oil Company's Hammett 2, 2-11n-1w, is rigging up to deepen after being abandoned early last spring at 3685 feet. Located in the old inactive Bruinsburg field near the Mississippi River, operations had been held up due to high water. Before abandonment upper horizons of the hole had been tested without success.

Hinds County: Huckleberry & Cline's School Lands 1, NW NW 16-6n-1w, has been abandoned as a duster at 4059 feet without any shows reported. Gas Rock was topped at 2995 feet and the Massive zone at 3697 feet. The Carter Oil Company's Simmons C-134, NWc SE NW 29-4n-3w, is drilling below 5600 feet with no shows indicated. Leonard Jones' M. Lerew, NW NE 15-5n-1e, Jackson gas field, is waiting on cement after a squeeze job at 2492-96 feet. The casing had been perforated with 41 shots, and the well swabbed a slight show of gas with quantities of salt water. Fair shows of oil previously had been recovered from cores at 2493 feet.

Jefferson County: Gulf Refining Company's Ella Cato 2, NWc NE 30-8n-4e, is preparing to drill after whipstock operations at 4300 feet. The well previously had reached a depth of 7072 feet with no shows tested at any point.

Smith County: Gulf's Grissom-Ainsworth 1, NEc 21-10n-14w, is drilling below 8315 feet with no shows. Cores between 7840-7928 feet recovered only sandy shale and sand with low porosity. Gulf's O. P. Foley 1, SE NW 8-10n-13w, which previously was abandoned in salt section at 2269 feet and is now being drilled deeper, has reached a total depth of 4000 feet. Base of salt was tabbed at 3513 feet and cores taken below that point recovered several feet of dark shale. No shows have been reported.

Wayne County: Gulf's Mrs. W. J. Clark 1, SEc 2-9n-9w, Eucutta field, has been completed successfully with an initial production of 80 barrels of 30.7-gravity oil per day. Production is from perforations between 5226-42 feet in the Eutaw horizon. Magnolia Petroleum Company's W. W. Reynolds' 3, SEc 18-9n-8w in Eucutta is preparing to work the well over after encountering considerable salt water in initial production tests. Casing was perforated at 5188-92 feet and good quantities of oil were swabbed, but when the well was put on pump it went to salt water. Last production rate reported was 5 barrels of fluid per hour of which ⅓ was salt water. Magnolia's G. S. Stanley 6, SW NW 8-9n-8w, Eucutta, is drilling below 5200 feet after cores taken between 5158-63 feet recovered only a few feet of shaly sand with stains. Earlier tests of the Eutaw in the 5100-foot zone swabbed small quantities of oil with large amount of salt water.

Jasper County: Fohs Oil Company's L. Lightsey 3, NW SW 18-1n-13e, East Heidelberg field, is installing pump preparatory to completion after swabbing oil from several sections of the Eutaw between 4788-4918 feet. Previous tests at lower levels below 5000 feet had produced quantities of salt water in addition to oil, but the water was successfully squeezed out.

California's Building Ready

The California Company has completed an office building in Natchez, Mississippi, at a cost of $50,000.

It will house a staff of 50, and will be under the management of J. O. Sanders, district superintendent. Among those departments which the building will house are those under the supervision of C. A. Mitchell, district civil engineer; J. V. Collins, district petroleum engineer; G. W. Gulmon, district geologist, and Fred Brown, office manager.

Resources Surveyed

H. M. Morse, supervisor of the Mississippi Oil & Gas Board, and chairman of the engineering group of the State Oil & Gas Advisory Committee, has commenced the most exhaustive reserve, development and availability study of the oil and gas resources of Mississippi ever attempted. Detailed questionnaires have been mailed to the principal producers of the state requesting essential material and data. Governor Bailey has written the oil companies and requested their unreserved cooperation.

☆ Alabama

Three Wildcats Are Staked; Gilbertown Has New Test

Three wildcats staked in different counties; new test started in East Gilbertown field; failure reported in Washington County.

Choctaw County: The Carter Oil Company's Sam Allman 1, SWc NE SW 5-10n-3w, which has extended the Gilbertown field 3 miles east and 1 mile south, was completed for 56 barrels of 17.5-gravity oil per day. Production is from the 3300-3400-foot zone of the Eutaw. Operators are still having some trouble with salt water and will work over the well in an effort to eliminate the difficulty. Carter's Caroline Moseley 1, SW SE NW 5-10n-3w, offset to the Allman 1, is installing pump after swabbing an estimated 100 barrels a day. Tubing with packer was run to 3241 feet. In a drill-stem test at 3240-3327 feet, 310 feet of oil and oil and mud were recovered in 2 hours.

Carter has started work on the third test for the new sector, Sam Allman Unit 1, C SW SE NE 5-10n-3e, and has set surface casing.

Washington County: Wayne Refining Company's Willie Mitchell 1, SEc NW NE 12-8n-3w, once abandoned and then redrilled, has finally abandoned operations at 5527 feet. Shows of oil and gas had been reported from the Wilcox horizon in cores but drill-stem tests recovered only water in the section between 1066-70 feet.

J. T. Parks' Hobson 1, C SW NE 9-8n-2w, is drilling below 4720 feet.

Wilcox County: Southern Natural Gas Company's Morgan 1, C SE SE SW 32-12n-5e, one of the state's deepest tests,

is below 7240 feet. The Eutaw horizon showed salt water.

Seaboard Oil Company of Delaware is beginning operations at S. M. McConnico 1, 32-12n-10e, deep wildcat. It is north of the Bethel fault zone.

Walker County: J. H. Deason has made location for DeBardelaben 1, C SE NW 6-14n-5w, wildcat.

Mobile County: S. H. Caudelet is rigging up rotary tools for Boykin 1, C S½ NE SE 25-2n-1e.

Georgia

Kerlyn Oil Company has started work at Cecil Pate 1, C SE¼ Lot 144, Land District 13, Crisp County, Georgia's single wildcat test, and is digging pits.

Florida

Florida has another apparent failure, as The Pure Oil Company ran electric log in International Paper Company 2, 31-1s-10w, Calhoun County, at total depth of 5095 feet. No showings have been reported.

Highlands County: Humble Oil & Refining Company's G. C. Carleton Estate 1, C SW NE 34-38s-29e, is drilling below 11,136 feet in hard black lime. The wildcat has logged several showings but they are not thought to be of commercial quantity.

Collier County: Humble's Sunniland test, Gulf Coast Realties 7, C SW NE 17-48s-30e, is drilling at 10,900 feet and nearing the pay zone.

Charlotte County: Humble's Lowes-Treadwell 1-A, C SW NE 17-42s-23e, is drilling below 10,363 feet in lime.

Monroe County: Gulf Refining Company's State 1, 2-67s-29e, is rigging up rotary tools. This will be a deep wildcat test off the Florida coast.

O. D. Robinson's State 1, 29-59s-40e, is shut down at 6368 feet, waiting on a new derrick. Original derrick was destroyed by the recent hurricane. No shows have been reported.

Texas Company's Oregon Wildcat Is Abandoned

Failure in its first test oil well, part of general wildcatting operations in the Pacific Northwest, is announced by The Texas Company.

Clatskanie 1 in Columbia County, Oregon, has been abandoned. The company, however, plans to drill another well in Washington County, about 15 miles west of Portland.

The Clatskanie well was drilled to 5650 feet with no showing of oil or gas. The company is holding the leases in Columbia County, which include 95,900 acres of county land.

Michigan Generally Will Continue 40-Acre Spacing

With only a few minor exceptions Michigan oil operators have recommended continuing 40-acre spacing in fields discovered and partly developed during the war. In a few pools developed on 20-acre units before PAW's wider spacing order in 1941 operators have asked authority to carry out some filled-in development.

The State Oil Advisory Board, following a public hearing September 14, recommended setting 40-acre units as the minimum in all the 25 pools developed during the war except Deep River in Arenac County, where 10-acre locations were approved.

Snodgrass and Heroy to Address IPAA Meeting

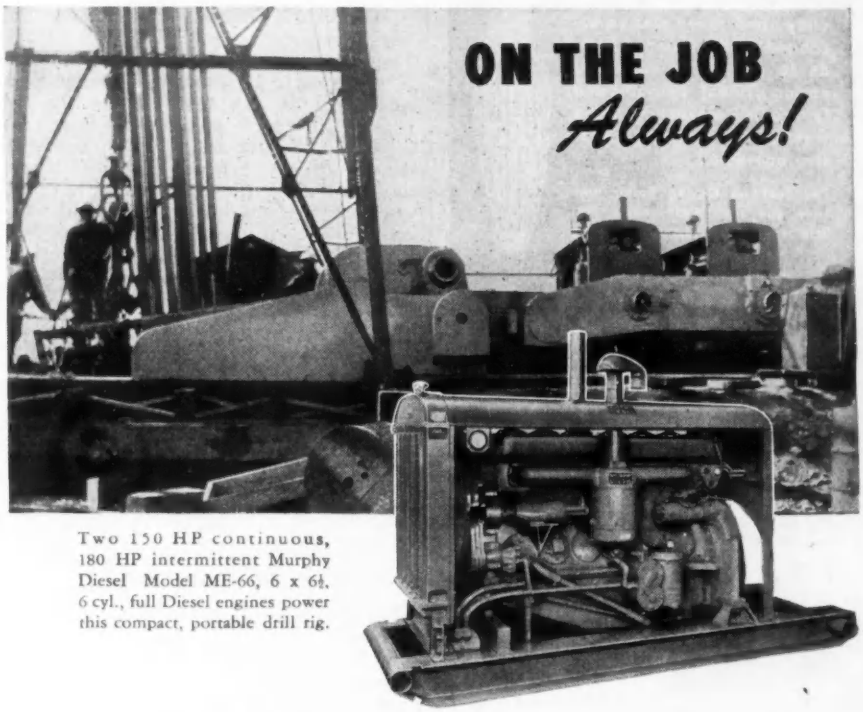
PAW representatives who will address the first postwar membership meeting of the Independent Petroleum Association of America in Tulsa October 14-17 include C. S. Snodgrass, associate director, foreign division, and William B. Heroy, director, division of reserves. Snodgrass' topic will be "We Bombed the Nazis Out of Oil" and Heroy's "World Oil Supply."

Registration begins Sunday and will continue Monday, preceding a business session of the National Stripper Well Association.

H. B. Fell, executive vice president of IPAA, will preside over Sunday's noon luncheon and Howard J. Whitehill, NSWA president, will preside over Monday's luncheon meeting which will be under NSWA auspices. General sessions will begin Monday at 2:30 p.m. President Ralph Zook will deliver the annual address at the Tuesday luncheon, to be followed by a discussion of oil in the nation's capital by Russell B. Brown, general counsel of the association.

W. G. Skelly, president of Skelly Oil Company, general arrangements chairman, will preside at Wednesday's luncheon when Merle Thorpe will be the featured speaker.

Adjournment will come Wednesday afternoon following election of officers.



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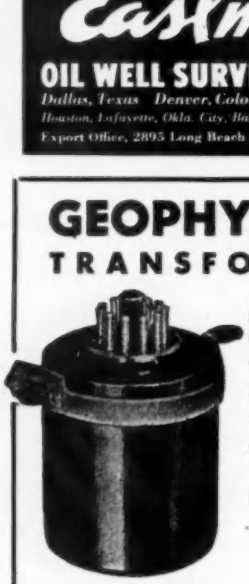

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TRADING POST SECTION
ON PAGE 87 OF THIS ISSUE

☆ Michigan

Roscommon Wildcat Logs Oil Pay in Traverse Lime

Roscommon County wildcat logs pay in Traverse lime; 10-day production test gives new Montcalm County discovery "safe production rating" of 175-200 barrels per day.

Roscommon County: E. V. Hilliard's State D-1, E½ SE SE 19-21n-3w, Roscommon Township, logged Traverse lime at 3163 feet and carried 500 feet of oil at 3183 feet where drilling was suspended to test. The wildcat is 1½ miles northwest of the old Headquarters (Traverse lime) pool and about ¾ mile northwest of an isolated Richfield lime producer.

Montcalm County: Union and Barbers' Gyger 1, W½ SE NW 1-11n-7w, Douglass Township discovery, flowed 300 barrels in 11 hours on ½-inch choke and in a 10-day test for bottom-hole pressure reaction at different flow rates appeared to have a safe maximum withdrawal of between 175 and 200 barrels daily. The outpost, located 12 miles northwest of the old Crystal field and 4 miles south of the Six Lakes gas field, is rated as the best field prospect of the year.

Sohio Petroleum Company, which contributed to the producer, has 3 of the direct offsets and dominates the acreage spread.

Missaukee County: Wright and Scotts' Weilder 1, W½ NW SE 34-22n-7w, 2 miles north of the Riverside gas field, drilled Dundee section dry at 3946-4121 feet and will perforate in Stray sand section at 1395-98 feet to test for gas.

Construction Planned by Standard of California

Plans for a construction program totaling more than $20 million have been announced by H. D. Collier, president of the Standard Oil Company of California. This program, held up by the war, will include additions and improvements to refinery, storage, distributing, producing and office facilities of Standard of California and its domestic subsidiaries.

The company also is expanding its tanker fleet at a cost of approximately $13 million by the middle of 1946, and is furthering its plans for drilling and exploration work and for additional expansions expected to develop in the next 2 years.

The largest part of the delayed expenditures will be at the Richmond and El Segundo, California, refineries.

☆ California

Well in Santiago Field Is Scheduled for Completion

Richfield well scheduled for completion in new Santiago field; 2 good wells completed in Cymric deep sand as drilling activity shows increase; new developments lacking in Los Angeles Basin hotspots but area continues to attract wide attention.

Kern County: Richfield Oil Corporation this week expects to bring in its first well in the Santiago field, discovered 2 months ago by Western Gulf Oil Company. Richfield's Leutholtz A-2 in 22-11n-23w has 8⅝-inch casing cemented at 2710 feet. Total depth is 3082 feet with top of the oil sand placed at 2710 feet. Western Gulf's discovery well, Woodward-U.S.L. 2 in Sect. 21 was completed a few weeks ago, flowing 1200 barrels of 24-gravity clean oil through a ½-inch choke. Top of the Miocene oil sand was logged at 2460 feet. Thus, Richfield picked up the sand 250 feet deeper than the discovery well, which supports the theory that the structure dips sharply. Western Gulf has Woodward-U.S.L. 3 in Sect. 21 drilled to 991 feet with 10¾-inch casing cemented at 530 feet for a test of upper showings in the Tulare formation. The company's original well in the area, Woodward-U.S.L. 1 in Sect. 21, also was completed in the Tulare and is currently producing about 5 barrels. Good showings in the No. 3 well indicate a better well is in prospect. Union Oil Company is running crude gathering lines into the field.

Standard Oil Company of California completed 2 wells from the Anderson sand in the Cymric field. Weston 34-26 in 26-29-21 was good for 358 barrels of 32.9-gravity oil and Weston 44-26, also in Sect. 26, made 252 barrels initially. Independent Exploration Company's Oceanic 1 in Sect. 22 is drilling below 2500 feet in search of production from the same sand but its distance from existing production places it in the wildcat category. Union's well-located Anderson 56-26 in 26-29s-21e is drilling below 3425 feet. Union has staked 3 additional wells on the Anderson lease. Standard has spudded a third well on its Weston lease and staked a fourth.

Williams Brothers Oil Company has brought in its second well in the shallow field which it discovered in the Antelope Hills 2 months ago. Layman 2 in 12-28s-19e was completed from 920 feet pumping 20 barrels of 21-gravity oil and considerable gas. Layman 4 is scheduled for early completion and Layman 3 is rigging up.

Testing of Bandini Petroleum Corporation's Bacon 1 wildcat in 27-28s-20e has been held up by mechanical trouble. Operator is running in a second retainer to recement splice at top of liner. The first retainer stuck and was milled up. Well is bottomed at 11,001 feet with plug at 10,900 feet.

San Joaquin County: Shell's wildcat, Staten Island 1 in 35-4n-4e, appears slated for early abandonment. Well was drilled to 5700 feet with electric log revealing nothing of interest.

Los Angeles County: Standard of California is drilling below 10,570 feet in its Leffingwell wildcat, Lewis Community 1, 11-3s-11w. The Ohio Oil Company was still endeavoring to shut off water in its Gardena wildcat, Gardena Community 1 in 24-3s-14w. Richfield was still engaged in a fishing job on U. P. Unit 1, Bandini area, 9-2s-12w. In the same area C. G. Willis is prospecting below 8000 feet in Pansini 1.

Shell's deep test of the Long Beach field, Alamitos 48-A, hit the 14,000-foot mark, the operator's only comment being that the formation seemed to be

getting a little softer. Drilling progress has been slow for the last 1500 feet.

Seaboard Oil Company's L. A. Brick 1 wildcat, a mile from the Los Angeles city hall, is drilling in hard shale below 6890 feet. Only minor showings have been encountered.

In the Del Valle area Universal Consolidated Oil Company and Tom Adams are preparing to drill a test in 13-4n-18w.

☆ Rocky Mountain Area

Wildcat on Midway Dome, Wyoming, Tests Dakota

Midway Dome, Wyoming, wildcat testing Dakota; Washakie County, Wyoming, wildcat shows saturation in Frontier; large well completed in Rangely field, Colorado.

Wyoming

Kerlyn Oil Company, jointly with Phillips Petroleum Company, is testing the Dakota in Government 1, NE SE NE 23-35n-79w, wildcat on Midway Dome, Natrona County. The well, which has been standing idle for several months waiting on standard tools, was perforated opposite the Dakota at 5950-5960 feet with 48 holes. A core taken in the Dakota at 5955-5973 feet showed fairly well saturated sand in the 7-foot section from 5962-5969 feet, and on what was believed to have been an unsatisfactory drill-stem test, recovered 1200 feet of mud and 400 feet of black oil in 20 minutes.

Government 1 was drilled into the Madison to a total depth of 8430 feet. The Tensleep, topped at 7620 feet, carried water.

Worland Dome: The Pure Oil Company's wildcat test of Worland block, Unit 1 in NE NW NW 18-48n-92w, Washakie County, recovered 28 gallons of 55-gravity distillate on a 7-minute drill-stem test of the second Frontier at 7228-7272 feet. Gas was estimated at 5 million cubic feet daily. The well is now drilling for the third Frontier at 7335 feet.

Colorado

The California Company has completed Fee 11, SW SE 28-2n-102w, Rangely field, Rio Blanco County, Colorado, as an excellent Weber sand producer. The well penetrated the Weber 726 feet to a total depth of 6368 feet. In the first 24 hours the flow was 507 barrels through a ¼-inch tubing choke. A test being started by Continental Oil Company in Rooth 1, C NW SW 15-2n-103w, on the northwest side of the field.

Wasatch Refining Company-Newton Oil Company's Gentry 2-D, C SW NE 3-1n-102w, in the southeastern end of the field, is testing production at a total depth of 6379 feet after shooting with 1500 quarts of nitroglycerine at 5782-6340 feet.

Northwestern Colorado's deep tests are both drilling below the 11,000-foot mark. The Texas Company, jointly with California, is drilling at 11,435 feet in a deep test of the Wilson Creek oil field, Rio Blanco County, Unit 20, NE SE NE 34-3n-94w. The Superior Oil Company of California in Miller 1, SW SW NW 36-8s-91w, Divide Creek wildcat, Mesa County, is drilling in the Sundance at 11,940 feet.

☆ Canada

Shell Expands Operations On Central Alberta Plains

Shell Oil Company of Canada has expanded operations on the Central Alberta Plains where it has been engaged for several months in geological and geophysical work in the Birch Lake-Innisfree area. The company has now taken up Crown Reservations covering 142,236 acres, centering on Fribourg, northeast of the Shell Birch Lake holding.

Bata Petroleums Ltd. has started Bata 11 in lsd 4 19-39-22w3, seeking an east extension of the Vera-Unity (Saskatchewan) gas field. The well is a mile east and ¼ mile north of Bata 7, discovery Basal Lower Cretaceous sand gas well, and most easterly of the B.L.C. sand gas wells. Bata 10, lsd 3 15-39-23w3r, has been abandoned at 2336 feet. The well, seeking a further southwest extension of the gas field, found a small gas flow in a thinner than normal Viking sand, and failed to yield commercial volumes of gas from a thin B.L.C. sand topped at 2325 feet. The Devonian was entered at 2331 feet.

Phillips to Speak

A talk on "Trends in Taxation" by J. A. Phillips of Houston has been added to the program of the fifth annual convention of the American Association of Oil Well Drilling Contractors scheduled October 1-2 in Oklahoma City. Phillips' address will be given Tuesday morning.

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ALABAMA WILDCAT

Washington County — Failure: Wayne Ref. Co.'s Willie Mitchell 1, sec nw ne 12-8n-3w, Eutaw 3323 ft, Tuscaloosa 3861 ft, abnd 4432 ft.

ALABAMA OUTPOST

Choctaw County — Gilbertown Extension: Carter's Sam Alman 1, swc ne sw 5-10n-3w, elev 159 ft, 2½ mi e prod, Eutaw 3337 ft, pump 20 bbls 17.5-gr oil, 18 bbls sw fr 390 perf 3336-3401 ft, td 3461 ft.

CALIFORNIA WILDCATS

Solano County—Failure: Amerada's E. Wineman 1, 27-6n-2e, Dixon area, abnd 4924 ft.

Kern County—Failures: E. A. Bender's Williams 1, 32-29s-28e, East Bakersfield area, abnd gray sd 4289 ft.

Rothschild Oil Co.'s K.C.L.-A 83-13, 13-30s-26e, Gosford area, abnd 7495 ft.

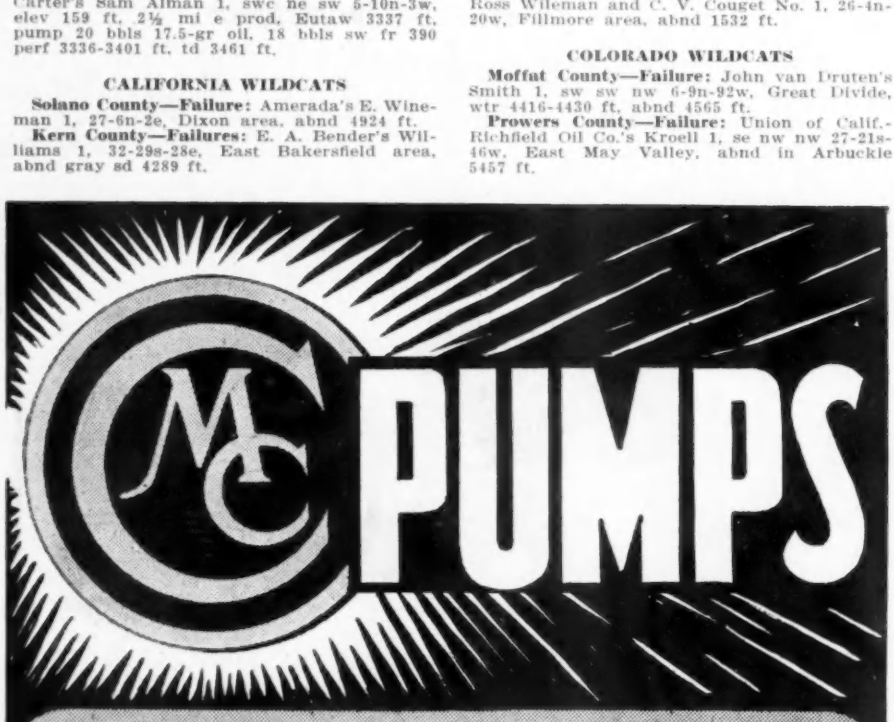
Fresno County—Failure: Union Oil Co.'s Irvine 65-13, 13-13s-12e, Irvine Ranch area, Kreyenhagen 3215 ft, Domengine 3845 ft, Martinez 4088 ft, Dos Palos 4388 ft, Jergins equivalent 6576 ft, abnd 6829 ft.

Ventura County—Failure: E. E. Perkins, Ross Wileman and C. V. Couget No. 1, 26-4n-20w, Fillmore area, abnd 1532 ft.

COLORADO WILDCATS

Moffat County—Failure: John van Druten's Smith 1, sw sw nw 6-9n-92w, Great Divide, wtr 4416-4430 ft, abnd 4565 ft.

Prowers County—Failure: Union of Calif.-Richfield Oil Co.'s Kroell 1, se nw nw 27-21s-46w, East May Valley, abnd in Arbuckle 5457 ft.



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ILLINOIS WILDCATS

Clark County — Failure: Grant Gallatin's Rothrock 1, ne sw sw 6-9n-13w, abnd 650 ft.

Clay County—Oil Discovery: W. C. McBride's Hohlback 1, ne ne ne 14-3n-7e, Cyp 2622-44 ft, pump 36 bbls, td 3081 ft.

Franklin County—Failure: Ashland O&R's Old Ben Coal Co. 1, se se se 13-6s-1e, abnd 2848 ft.

Gallatin County—Failure: S. C. Yingling's Hardy 1, se se se 5-8s-10e, abnd 2190 ft.

Jefferson County — Failures: Aetna Oil's Spangle 1, ne ne se 12-2s-1e, abnd 2366 ft.

Ben H. Nation's Green et al 1, nw ne ne 7-2s-4e, abnd 2995 ft.

Jefferson County—Oil Discovery: Magnolia's Zohn Est. 1, se nw ne 26-4s-4e, O'Hara 3238-46 ft, pump 7 bbls, td 3380 ft.

Marion County—Failures: Angle & Redwine's James 1, ne nw nw 22-2n-3e, abnd 2719 ft.

Skelly's Jacobs 1, ne nw nw 31-3n-3e, abnd 2435 ft.

White County—Failure: Pittsburgh Coal et al's Land 1, nw nw se 25-5s-9e, abnd 3162 ft.

White County—Oil Discovery: Pure's Brown 1-A, ne ne ne 1-6s-8e, Hards 2664-72 ft, pump 225 bbls, td 2680 ft.

KANSAS WILDCATS

Ellis County—Oil Discovery: Darby & Bothwell's Cromb 1, ne nw nw 22-11s-20w, Lans 3467-71 ft, flow 190 bbls oil, 20 bbls wtr, td 3685 ft.

Greenwood County—Failure: K. T. Weideman's Riggs 1, nw sw ne 25-27s-10e, abnd 2083 ft.

Haskell County—Failure: Carter Oil's Dietz 1, 50 ft W of C 6-29s-31w, Hollenberg 2605 ft, Herington 2660 ft, Winfield 2766 ft, Ft. Riley 2818 ft, abnd 2922 ft.

Phillips County—Failure: Stanolind's Willtrout 1, sw cor 35-4s-20w, Lans 2086 ft, Arb 3384 ft, abnd 3386 ft.

NORTH LOUISIANA WILDCATS

Natchitoches Parish—Failure: E. H. Demitrio's Prudential Life Ins. 3, ne se 16-10n-9w, abnd 750 ft.

Richland Parish—Oil Discovery: R. J. Caraway's Bryant 1, c se nw 35-17n-8e, gas sand 3075-81 ft, oil sand 3113-27, 3148-66 ft, perf 104 shots 3148-65 ft, flow 199 bbls 40.5-gr, ⅛-in, cp 1000 lbs, tp 478 lbs, gor 588/1, td 3220 ft.

NORTH LOUISIANA OUTPOSTS

Richland Parish—Big Creek Failure: Roy L. Fisher's W. M. Spruel 1, 4-16n-8e, 1 mi s, ¼ mi e prod, perf 2992-3008 ft, swabbed dry, shut in, flow 6 bbls per hr for 2 hrs and went dead, abnd 3237 ft.

Richland Parish—Delhi Failure: Jas E. Kemp-R. J. Caraway's Roy Snyder 1, c sw ne 24-17n-9e, 1½ mi e prod, ssg 3312-22 ft, oil sd 3350-3405 ft, perf 3313-20 ft, test gas, squeezed, casing collapsed, jnkd and abnd 3563 ft.

SOUTH LOUISIANA WILDCAT

St. Landry Parish—Failure: Ralph E. Yates et al's J. C. Meyer 1, start swc sect 15 go 2325 e th 660 n to lcn 15-5s-7e, abnd 5192 ft.

MICHIGAN WILDCATS

Alcona County—Failure: R. P. Donahue's Burton 1, nw nw sw 34-26n-8e, abnd 1995 ft.

Allegan County—Failures: Eric Bock's Irey 1, nw nw se 22-1n-16w, abnd 1160 ft.

R. B. Tamblyn's Spray 1, e½ nw ne 3-3n-13w, abnd 1742 ft.

Arenac County — Failure: Frank Roush's State 1, se se se 21-20n-6e, Dundee 2863 ft, abnd 2945 ft.

Kalamazoo County—Failure: Vanco Oil Co.'s DeRight 1, ne ne nw 13-3s-11w, abnd 1294 ft.

Missaukee County—Failure: Gulf's Ponstine 1, n½ ne se 25-21n-7w, Dundee 3915 ft, abnd 3971 ft.

MISSISSIPPI WILDCAT

Hinds County — Failure: Huckleberry & Cline's School Lands 1, nw nw 16-6n-1w, gas rock 2995 ft, Tuscaloosa 3410 ft, Massive sd 3697 ft, abnd 4059 ft.

OKLAHOMA WILDCATS

Kay County—Failure: Prunty Drlg. Co.'s Morain 1, ne ne nw 27-28n-3e, Os 2814 ft, Br 3074 ft, abnd 3226 ft.

Greer County—Failure: Stephens Pet. Co.'s Johnston 1, se se nw 24-5n-21w, abnd 910 ft.

Murray County—Failure: Sinclair Prairie's Youngblood 1, sw sw sw, abnd 4464 ft.

Pottawatomie County—Failures: Texas Co.'s Whitaker 1, se se nw 28-7n-3e, abnd 5403 ft.

Gulf et al's McClung 1, se ne ne 22-8n-5e, abnd 4304 ft.

Frank Anderson et al's Fred Good 1, se sw 3-11n-5e, abnd 4921 ft.

Stephens County—Distillate Discovery: Gulf's Briscoe Est. 1, se nw 36-2n-8w, Basal Penn

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■ Will have completely new Failing 1500 Core Drilling Rig available for hire by November 1, 1945. L. C. S. Core Drilling Co., Box 522, Telephone 1216, Victoria, Texas.

■ WANTED: Oil production, prefer large deals. W. K. Mann, Osage Hotel, Arkansas City, Kansas.

■ Financial aid is wanted to drill an 8500 foot well in Leon County, Texas. Address: Box 29, c/o The Oil Weekly, Houston, Texas.

ESTABLISHED GEOLOGIST with broad experience in acquiring early royalty, desires to contact investors interested in scientifically selected royalties in best major company geophysical prospects. References exchanged. Address: Box 15, c/o The Oil Weekly, Houston, Texas.

WANTED: OIL & GAS ROYALTIES

Will buy sizable group of oil or gas royalties priced on an income basis.

A. W. ADKISSON

W. T. Waggoner Bldg., Ft. Worth, Texas

HELP WANTED

■ Wanted by a consulting geophysical organization: Petroleum Engineers with Hayward Mud-logging experience or its equivalent. Immediate openings in Venezuela. Excellent opportunity for advancement to managerial positions throughout the world. Address: Box 45, c/o The Oil Weekly, Houston, Texas.

■ GEOLOGICAL MAP DRAFTSMEN. Several openings for men with proper qualifications. Must be excellent freehand letterers. Geological knowledge unnecessary. Submit details of education, experience, and samples of freehand lettering. Reply Geological Department, P. O. Box 1650, Tulsa 2, Oklahoma.

■ SURVEYOR—experienced with plane table for work with contract seismographic field crew—promotion to field manager when familiar with work. Salary and expense allowance. Address: Box 26, c/o The Oil Weekly, Houston, Texas.

ATTENTION! OIL MEN!
Please Advise Your Veteran Friends!

We have two positions available for managers of district sales offices, Houston and Odessa, Texas, oil field equipment company. Preference: returned veterans with former oil company production engineering experience, Texans, 25 to 35 years old, college graduates. Permanent position, outside sales work, salary, and percentage. Send application and photograph to: Box 28, c/o The Oil Weekly, Houston, Texas.

■ Large independent producing company has openings in seismograph department for Party Chief, Observer, Shooter, Wireman, Geological Draftsman, Electronic-Shopman. Give full particulars, education, progressive experience, age, family status, condition of health, and salary desired. Communications confidential. Members of our own organization know of this advertisement. Address: Box 23, c/o The Oil Weekly, Houston, Texas.

WANTED TO BUY

■ WANTED: Second Hand pumping unit for 2500 ft. well. Also lease storage. Give description and location. Address: Box 31, c/o The Oil Weekly, Houston, Texas.

ADVERTISING RATES

TRADING POST SECTION

Regular classified advertisements for this special section, set in type this size without border, take flat-rate of 7 cents per word for the first insertion and 5 cents per word for each subsequent insertion of same copy. Display advertisements for this section, set in suitably larger type with ruled border, are $5.00 per inch for the first insertion and $4.00 per inch for subsequent insertions. Remittance must accompany copy which should be sent to:

Trading Post Section, The Oil Weekly

P. O. Box 2608 Houston 1, Texas

7732-74 ft, flow 78½ mln gas, 16.48 bbls dist per min, td 8104 ft.

WEST TEXAS WILDCAT

Howard County — Failure: C. W. Guthrie's Robert C. Scott et al 1, Sect. 64, blk 29, W&NW sur, abnd 3445 ft.

WEST CENTRAL TEXAS WILDCATS

Coleman County—Failure: L. H. Choate's W. A. Powell 1, M&DJ Trevino sur, abnd in shale and sd 2396 ft.

Runnels County—Failure: Callihan & Blak-

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933 OF THE OIL WEEKLY, published weekly at Houston, Texas, for October 1, 1945.

State of Texas, County of Harris, ss:

Before me, a Notary Public in and for the State and County aforesaid, personally appeared A. L. Burns, who, having been duly sworn according to law, deposes and says that he is the Business Manager of THE OIL WEEKLY and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Ray L. Dudley, 3371 Chevy Chase, Houston, Texas; Editor, Warren L. Baker, 1613 Woodhead, Houston, Texas; Managing Editor, Silas B. Ragsdale, 1636 North Boulevard, Houston, Texas; Business Manager, A. L. Burns, No. 7 Chelsea Place, Houston, Texas.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one percent or more of total amount of stock.)

The Gulf Publishing Company, Houston, Texas; James Anderson, Houston, Texas; A. L. Burns, Houston, Texas; James F. Carter, Jr., Tulsa, Okla.; Mrs. Mary Margaret Cashman, Houston, Texas; Mrs. Carolyn Dodson Dudley, San Angelo, Texas; Estate of Dr. N. L. Dudley, Deceased, Houston, Texas; Ray L. Dudley, Houston, Texas; Estate of W. S. Farish, Sr., Deceased, Houston, Texas; Wm. V. Gross, Utopia, Texas; Mrs. Anita S. Lane, Houston, Texas; Chas. H. Lane, Houston, Texas; Tom W. Nelson, Houston, Texas; Wallace E. Pratt, Carlsbad, N. M.; J. Kent Ridley, Houston, Texas; Mrs. Maud G. Sterling, La Porte, Texas; R. P. Swinsky, New York, N. Y.; O. R. Waller, Chicago, Ill.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and security in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

A. L. BURNS, Business Manager.

Sworn to and subscribed before me this 21st day of September, 1945.

P. J. AUCOIN,
(Seal) Notary Public in and for Harris County, Texas
(My commission expires June 1, 1947.)

SITUATIONS WANTED

GEOLOGIST WILL MOVE TO HOUSTON, completed all graduate work and had faculty experience at leading university, plus over four years experience with major company handling Gulf Coast and Southeastern States. Now with major company but family connections make move to Houston necessary. Desires connection with aggressive major company or strong independent at $500.00 or more per month. Address: Box 32, c/o The Oil Weekly, Houston, Texas.

■ Single man, 32, desires position with seismograph or geophysical crew. Foreign or domestic service. Army surveying experience. Available about Dec. 1. George Layman, 1853 Lemoyne, Los Angeles, Calif.

POSITIONS WANTED BY SERVICE MEN

■ In the interest of both employers and employes, **The Oil Weekly,** through its Overseas Pony Edition, which is sent free to 6500 former oil men now in the services, has offered to run advertisements from those who will be seeking work once they are discharged. In some cases **The Oil Weekly** has a few more details but, generally speaking, direct correspondence would be advisable. Unless otherwise indicated it may be some time before the person named in the advertisement is available.

■ A. & M. graduate in Petroleum Engineering, age 24, wants to start delayed career in oil industry. Will be discharged within a month. Capt. J. A. Graham, Jr., 615 West 16th St., Tyler, Texas.

ley's Jennings 1, E. Morris sur, abnd in sd at 3120 ft.

SOUTH CENTRAL TEXAS WILDCAT

Dimmett County—Gas Discovery: Calatexia Oil Co.'s S. E. McKnight 1, 467 e 2366.5 s fr nec sect 22 on 153.5-ac lse, blk 13, sect 35, perf 36 shots 2638-45 ft, flow 1,300,000 gas open, rp 1040 lbs, td 2995 ft.

SOUTHWEST TEXAS WILDCATS

Duval County—Failure: J. W. Kunetka's W. A. Tinney 1, 515 fr bl 1472 fr wl 116.33-ac lse, A. J. Bryant sect 8, abnd 767 ft.

McMullen County—Failures: Midstates Oil Corp.'s Nueces Ld. & Livestock Co. 1, 2855 se alg nel fr nec 720-ac lse 1320 sw at ra to lcn, Jacob Matossy sur 86, 10 mi w Loma Alta fld, abnd 1606 ft.

Quintana Pet. Corp.'s Ethel L. Craig 1, 2915 fr el 3500 fr sl J. Poitevent sect 17, 4644.6-ac lse, abnd 5798 ft.

Quintana's South Tex. Synd. 7-F, 2185 fr sel 96,000-ac lse 960 fr nel 4425 fr nwl J. S. Clift sur 389, abnd 6642 ft.

LOWER TEXAS COAST WILDCATS

Bee County—Failures: Ashland O&R Co.'s Mary Zowarka et al 1, 467 fr nw&swl 40-ac lse, Bee CSL sur 16, abnd 4421 ft.

Bridwell Oil Co.'s J. W. Dryden Est. 1, 330 fr nw&nel 30.15-ac lse, Jas. Hefferman sur, abnd 4018 ft.

Brooks County—Failure: Ralph E. Fair's Jose Garcia 1, 467 fr sl 1400 fr wl 214.5-ac lse, L. A. Mestena Gr, 1½ mi ne Alta Mesa fld, abnd 6350 ft.

Karnes County—Failure: Southern Minerals Corp.'s W. D. & O. L. Cochran 1, 3000 fr nl 467 fr el 2302.5-ac lse, D. B. McConnall sur, abnd 6110 ft.

Karnes County—Hysaw Oil Discovery: Seaboard of Delaware's E. N. Hysaw 1-A, 2350 nw alg nel 1600 sw at ra fr e cor 1069.11-ac lse, Don Erasmo Seguin sur, 50 se of Well 1, perf 3973-76 ft, flow 102 bbls, ⅛-in, gor 196/1, td 3982 ft.

Kleberg County—Failure: Lonnie Glasscock's Paul O. Henry 1, 631.7 fr e&wl 689.7 fr nl lot 4, sect 49, KT&I sbdn, 120-ac lse, abnd 7563 ft.

Lavaca County—Failure: Seaboard of Del.'s E. Sebastian 1, 660 fr ne&sel 107-ac lse, Jas. Lyons sur, abnd 8517 ft.

Nueces County—Failure: R. R. Smith-H. J. Mosser's Mrs. Agnes Gescheidle 1, 467 fr s&wl 200-ac lse, Casa Blanca Gr, O. B. Oliver tr, abnd 6209 ft.

Victoria County—Failures: Monday Oil Co. et al's Mary F. Miller 1, 467 fr se&nel blk 26, 319-ac lse, SA&MG sur, abnd 6808 ft.

Prod. Service Co.'s Laura Adams 1, 467 fr nl 330 fr wl 204.5-ac lse, Allen Talbot sur, 1000 nely fr Hopkins 1, abnd 5212 ft.

Victoria County—Gas Discovery: Rowan & Hope's Sally Ragsdale 3, 330 fr ne&nwl 165.22-ac lse, Jas. McConnaughey sur, perf 47 shots 4443-52½ ft, flow gas, no gge, ⅛-in, tp 1785 lbs, cp 1800 lbs, td 4453 ft.

UPPER TEXAS COAST WILDCATS

Chambers County—Failure: Sun's Moore Est. 2, 467 fr n&wl sect 23 T&NO sur, 640-ac lse, abnd 9132 ft.

Colorado County—Oil Discovery: Cities Service et al's John Schobal 1, 330 fr wl 4278 fr el 4328 fr nl 1194-ac lse 3500 n C. K. Gay 1, James Tumlinson Lge, pay 7820 ft, perf 12 shots 7857-59 ft, flow 124 bbls 36.5-gr, ¼-in, gor 1100/1, tp 1300 lbs, cp 1075 lbs, td 9752 ft.

Ft. Bend County—Failure: H. E. Williams' Marion I. Mellon et al 1, start swc 1577-ac lse go 9935 e alg sl 2550 n at ra to lcn, Ed. Robinson sur, 3 mi nw Lochridge fld, abnd 6325 ft.

Liberty County—Failure: Shell's J. H. Weaver 1, 467 s of ely/nl 467 w of ely/el 407-ac lse 467 s&w sec Shell's V. Herndon lse, Thos. Devers sur, N. Cleveland area, abnd 6058 ft.

Matagorda County—Failure: Atlantic's Craig Est. 1, 3050 fr nel 1967 fr nwl 833.75-ac lse, Thos. Williams sur, abnd 4126 ft.

EAST TEXAS WILDCAT

Leon County—Failure: Claude Bell's Rex Reed 1, 4 mi se of Flynn, 4580 nw of sel 4861 sw of nel, Thomas H. Garner sur, Wilcox 944 ft, wtr sd 988 ft, abnd 1003 ft.

NORTH TEXAS WILDCATS

Archer County—Failures: Carter & Winfrey's Cullum & Jones 1, SPRR sur, abnd 1659 ft.

George Proctor's Langford Investment Co. 1, Harris S/D Club Rch, shale 5135, Caddo 5037, abnd 5135 ft.

Cooke County—Failure: S. D. Johnson et al's Mrs. M. E. Aldridge 1, Robert Ekey sur, abnd in sd and shale 1618 ft.

Wichita County—Failure: Fain & McGaha-Sohio's George G. Adams 1, H&GN sur, sect 37, abnd in dry dolomite at 5305 ft.

WESTERN CANADA WILDCAT

Saskatchewan — Vera-Unity Failure: Bata Petroleums' No. 10, lsd 3 15-39-23w3rd, gas flows not in commercial volume, abnd 2336 ft.

WILDCAT STARTS

ALABAMA

Clarke County: Bering Oil Co.'s A. C. Gordon & Gordon Herne 1, sw nw 15-7n-1e, ru.

Mobile County: S. H. Caudelet's Boykin 1, ne se 25-2n-1e, ru.

Walker County: J. H. Deason's DeBardelaban 1, se nw 6-14n-5w, lcn.

Wilcox County: Seaboard's S. M. McConnico 1, nw 32-12n-10e, lcn.

ARKANSAS

Calhoun County: R. H. Crow's Stout Lbr. Co. 1, c se se nw 26-14s-14w, lcn.

Logan County: M. J. Reinhart's B. Nagle 1, c ne ne 11-8n-24w, lcn.

Miller County: G. Anthony et al's A. W. Smith 1, nwc se 24-15s-26w, lcn.

Ouachita County: J. Carnes' Reynolds & Gifford 1, swc se nw 8-14s-16w, lcn.

CALIFORNIA

Kern County: Independent Explor. Co.'s Sheep Springs 1, 21-29s-21e, Sheep Springs area, lcn.

Miller & York's 1, 13-28s-28e, Round Mt. area, lcn.

Kings County: F.S.&D. Oil Co.'s Core Hole 1, 8-24s-18e, Pyramid Hills area, dr.

Santa Barbara County: Western Gulf Oil Co.'s Bryce 1, 30-4n-25w, Carpenteria area, lcn.

COLORADO

Kiowa County: Union of Calif. U. P. 1, se se se 17-17s-48w, Eads district, lcn.

FLORIDA

Monroe County: Gulf's State 1, swc 2-67s-29e, piling.

GEORGIA

Crisp County: Kerlyn Oil Co.'s Cecil Pate 1, c se lot 144, land dist. 13, digging pits.

ILLINOIS

Clay County: J. J. Lynn's Goings 1, ne ne sw 24-3n-7e, dr.

Effingham County: W. W. Shoffer et al's Repling 1, sw sw se 14-7n-6e, dr.

Edwards County: Hagerman & Ponds' Harris 1, nw nw nw 21-1n-10e, dr.

Jefferson County: Texas Co.'s Batts 1, nw ne ne 31-4s-4e, lcn.

Marion County: Chas. Baldwin's Kerwin 1, nw nw sw 28-3n-1e, lcn.

H. F. Robinson et al's Vaughan 1, sw sw sw 36-3n-1e, dr.

Richland County: Mohawk Drlg.'s Bunn 1, ne sw sw 28-3n-14w, dr.

Washington County: Rock Island Ref. Co.'s Collmeyer Est. 1, ne sw sw 25-1s-3w, lcn.

INDIANA

Daviess County: Hoosier Gas Corp.'s Brown 1, sw sw nw 22-2n-5w, lcn.

KANSAS

Barbara County: Lion's Lemon 1-D, se nw ne 16-30s-13w, lcn.

Cowley County: Tom Palmer's Kittleson 1, nw sw sw 12-32s-3e, rust.

Phillips County: Tom Allen et al's Schorer 1, se ne ne 33-5s-19w, mirt.

Rooks County: Doley's O'Brien 1, ne ne sw 27-10s-19w, lcn.

Russell County: Beardmore Drlg. et al's Witner 1, nw nw se 3-14s-12w, mirt.

Sumner County: Eldorado's Damitt 1, nw ne nw 13-33s-2e, rur.

KENTUCKY

Henderson County: Sohio's Sayer 1, 1-P-27, lcn.

Union County: Ryan Oil's Greenwell 1, 17-P-20, dr.

NORTH LOUISIANA

Franklin Parish: C. W. Sharp's Baker 1, n&w se se 27-16n-9e, lcn.

Natchitoches Parish: M. T. Halbouty's J. M. Foster 1, 1-13n-8w.

Richland Parish: Warren Pet. Co.'s Hemler Scott 1, 2-16n-7e, Paluxy test.

SOUTH LOUISIANA

Beauregard Parish: Magnolia's M. J. Witski 1, 660 n&w of c 22-6s-11w, Oretta area, 10,000-ft test.

Vermillion Parish: Humble's A. J. Marceaux 1, start nwc sect 29 go ely alg nl 2003.1 th sly at ra 662.6 to lcn in 29-12s-2e, Kaplan area, 10,500-ft test.

MICHIGAN

Barry County: Louis Zeelman's Ellsworth 1, sw sw se 8-3n-10w, rig.

Kalamazoo County: W. D. Gannett's Stevens 1, nw sw se 21-3s-12w, rig.

Missaukee County: Gordon-Sohio's Land Co. 1, se sw sw 29-23n-8w, dr.

Freeman Oil Co.'s State 1, se se se 6-24n-7w, rig.

Muskegon County: Jacob Bolema's Hein 1, se se ne 32-11n-16w, lcn.

Osceola County: W. C. Taggart's Zimmerman 1, c se 1-17n-7w, lcn.

Washtenaw County: C. W. Collins' Hinderer 1, nw nw nw 36-2s-3e, dr.

MISSISSIPPI

Yazoo County: Carter's Susie Ingram 1, se se 2-12n-2w, lcn.

OKLAHOMA

Kay County: Olson Drlg. Co.'s Gowey 1, ne ne sw 9-28n-5e, lcn.

Noble County: Ace Gutowsky's Bowlby 1, ne nw 22-21n-1e, dr.

Stephens County: Skelly et al's Williams 1, se sw ne 16-1s-4w, mit.

WEST TEXAS

Crane County: Humble's N. M. Tucker et al 1, 660 fr sel 4620 fr nel sect 23, blk 1, H&TC sur, 6500-ft Simpson test.

Addison Drlg. Co.'s A. C. Hoover 1, 1650 fr sl 2310 fr wl sect 1, blk FFB&B, 2200-ft Clearfork test.

Floyd County: G. P. Livermore-Honolulu's H. A. Krauze 1, 660 fr s&el of sect 29, blk K, TT RR sur, 6000-ft Clearfork test.

Irion County: Shell's Tankersley 3, 1999 fr nl 664 fr wl, sect 10, GC&SF sur, 8500-ft Ellenburger test.

Ward County: Continental's F. H. Scott 1, 330 fr se&swl, sect 33, blk 33, H&TC sur, 5500-ft Delaware test.

SOUTH CENTRAL TEXAS

Atascosa County: Humble's Henry Schorsch 1, 660 fr n&wl blk 24 Atascosa Colony Farms sbdn, Edward Estes sur, 460.5-ac lse, 8000-ft test.

Bastrop County: John A. Drossos' A. J. Caldwell 1, 1000 fr nl 350 fr el 100-ac lse, Geo. J. Glasscock sur, 1075-ft test.

Medina County: Ralph E. Fair's G. C. McAnelly 1, 467 fr nel 2209 fr sl 1916-ac tr, E. C. Durst sur, 6000-ft test.

Milam County: J. C. Davis' Fee 1, 4040 fr nel 500 fr nwl 1200 fr sel 264-ac lse, J. J. Acosta sur, 1000-ft test, cable tools.

Williamson County: H. C. Lefors' John Filla 1, 330 fr ne&nly/sel 138-ac lse, F. N. Stiles surs 7&8, 900-ft cable tool test.

SOUTHWEST TEXAS

McMullen County: Argo Oil Corp.'s John E. Murphy 1-D, 467 fr n&el w½ BS&F sur 110, 303.5-ac lse, 3200-ft test.

Starr County: B. H. Cummings' Starr Co. Cattle Co. 1, 330 fr n&el blk 75 330 fr el of porc 89, sh 60-0, 47.14-ac lse, 2850-ft test.

LOWER TEXAS COAST

Fayette County: M. E. Davis' C. M. Janda 1, 330 fr s&el sect 64, 99-ac lse, Fayette CSL, 6000-ft test.

Goliad County: Santa Clara Oil Co. et al's Ida P. Huggins 1, 2333 fr nl 467 fr wl blk 3, 2249-ac lse, Maria de Jesus Ybargo sur, 4500-ft test.

Nueces County: Seaboard of Delaware's Clara Driscoll 17, 467 fr wl 3300 fr nl 447.7-ac lse, Jose A. Cabasos sur, 7500-ft test.

Refugio County: P. R. Rutherford's L. Zarsky 1, 467 fr nl 1320 fr el se¼ sect 13, Esteban Lopez sur, Johnson & Pugh sbdn, 160-ac lse, dr 1720 ft.

Victoria County: Monday Oil Co.'s Ina Dell York 1, 467 fr nw&swl 220-ac lse, Jas. Cheevers sur, 6400-ft test.

NORTH TEXAS

Archer County: G. J. Scholl et al's J. T. Richardson 1, 330 fr sl 330 fr wl of Lot 22-A, Jonathan Scott sur, 4800-ft rotary test.

Cooke County: Norwood & Anderson et al's M. W. Thompson 1, 330 fr sl 330 fr el Thompson 90-ac tr in n½ T. Bell sur, 3000-ft test, spud.

Jack County: Stephens Pet. Co.'s Mrs. P. A. Jackson 1, 1181 fr nl 1267 fr wl sect 1 WC RR sur, lcn.

King County: Roy H. LeBus et al's W. R. Ross 1, 330 fr s&el sect 89, blk A, J. R. Rector sur, 6500-ft rotary test.

WYOMING

Albany County: Trigood Oil Co.'s May 1, se nw ne 5-15n-77w, Centennial, drlg 910 ft.

Carbon County: Reserve Oil Co.'s Gov't-Walker 1, c sw sw 12-18n-85w, Saratoga, lcn.

Washakie County: G&G Oil Co.'s Gov't 1, se cor lot 8, 19-45n-92w, Neiber anticline, Embar-Tensleep test, lcn.

WESTERN CANADA

Saskatchewan — Vera-Unity: Bata Petroleum's No. 11, lsd 1 19-39-22w3rd, dr.

SQUEAKS from the BULL WHEEL

History in Reverse

They decided to celebrate their twenty-fifth wedding anniversary by repeating the original honeymoon.

The first day back, John ran into his old Best Man. "Well," grinned the B.M., "how did it go the second round?"

"Oh, much the same as the first time, except that this time I was the one who went to the bathroom and cried."

Hot off the Girdle

Two young models were attending an art exhibit one afternoon when one suddenly grabbed her friend by the arm and, pointing to a particularly daring canvas, exclaimed: "Why, Mabel, that is a portrait of you. I didn't know you posed in the nude!"

"I don't," came the grim reply. "The rat must have painted it from memory."

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See LAMTEX, Composite Catalog, pages 1570-1571

Meaty Reading

"Betcha can't define tidbit."

"Aw, that's what happens just before the calf gets kicked to kingdom come."

This Curious World

Most men have monkey eyes—they swing from limb to limb.

The saddest fellow we know is a man whose wife ran away with his best friend. "Gee," he moans, "I really miss that guy."

If a girl doesn't watch her figure, nobody else will.

She's the kind of girl who, if you see her dining with a man old enough to be her father, he is.

Many girls are natural-born artists—they know exactly where to draw the line.

Whoever named it necking knew nothing of anatomy.

A sailor went swimming and was having lots of fun until he was almost drowned by a cold WAVE.

Girls who know the answers to all the questions are girls who have been out with questionable men.

A perfume manufacturer is a man who always has his business in other people's noses.

Reconversion problem: Getting the women out of the war plants and into the kitchen—or from nuts to soup.

Poet's Nook

She was young, fair and pretty,
She's a girl I'll never forget;
We were in a Pullman sleeper
When, by accident, we met.
Yes, I always shall remember well,
The girl and time and place;
I was coming from an upper berth
And stepped upon her face.

A Sad Sack

An Englishman, visiting in this country, borrowed an automobile from an American friend and was setting out with considerable trepidation to tour the countryside. Scrupulously observing all of the roadside admonitions, he presently came to one reading, "Drive Carefully! This Means YOU!"

"Righto!" said our British cousin, slowing down to a conservative 20 miles. "But Hi say," he mused, "how do you suppose they knew I was over here?"

Pleasant Nightmare

A certain old lady had a recurring nightmare in which a young man pursued her with intentions obviously dishonorable.

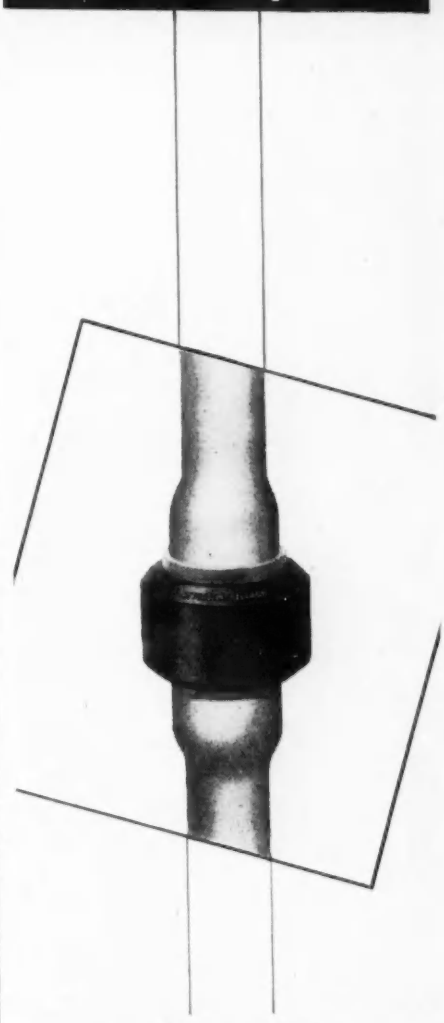
She consulted a physician, told him about the dreams, and was given some medicine to make her sleep better.

In a few days she was back again.

Now, now," said the doctor. "Don't tell you you still don't sleep well."

"Oh, no, it isn't that, doctor. But to tell the truth, I certainly do miss that young man.

"Best Bet Yet"



Cut Metal-to-Metal Contact

These oil-proof, insulating, wear-resistant, plastic tubing protectors are an integral part of the tubing collar. Made in all sizes, they prevent the metal-to-metal contact that causes many expensive "wet" jobs in pumping wells. Without this contact, the collars do not wear holes in the casing.

See Composite Catalog

Patterson-Ballagh
TUBING PROTECTOR
LOS ANGELES 1 · HOUSTON 10 · NEW YORK 6

MEN IN THE INDUSTRY NEWS

Arthur F. Corwin, vice president, director and a member of the executive committee of the Socony-Vacuum Oil Company, will retire October 1. He has been in charge of crude oil production for the company.

Arthur F. Corwin

Corwin was graduated from the Sheffield Scientific School at Yale University in 1899 and entered the oil business in the fields of West Virginia and Pennsylvania.

He became president of The Carter Oil Company in 1915 and remained with that company until 1926. At that time he was made a director of the Standard Oil Company of New York and then a director of Socony-Vacuum, its successor, in 1932. He has been a member of the executive committee since 1933 and a vice president since 1934.

John O. Larson of the coordination planning department has been named an assistant secretary of Standard Oil Company (New Jersey). Larson has been with the company since 1927, starting as a clerk. All of his service has been in the coordination and economics department. He will be an assistant to **A. C. Minton,** secretary of the company.

George E. Simon has joined the engineering staff of the Kansas-Nebraska Gas Company, Inc., and is located at Phillipsburg, Kansas. Simon worked for Cities Service Gas Company in eastern Kansas for many years and recently was in the engineering department of Boeing Aircraft Company, Wichita, Kansas.

Robert G. Smith, Tulsa representative for General Electric Company, presented a film, "Automatic Pilot," before the Engineers Club of Tulsa. **J. H. Douglas,** chief engineer, Southwest District, Dallas, gave the history and explained the development of the new General Electric wire recorder.

M. M. Sheets has been made district geologist for Stanolind Oil & Gas Company with headquarters in Houston, succeeding **Ray Lewis,** who has joined Houston Oil Company of Texas as chief geologist.

Harry A. Winne, vice president in charge of engineering for the General Electric Company's apparatus department, has been appointed vice president in charge of engineering policy for the entire company.

Ernest E. Johnson, assistant engineer of the aeronautics and marine engineering division, has been named to succeed Winne.

Lt. Col. Howard G. Pyle, deputy chief of the Army general staff's oil branch in Europe, who has retired from Army duty, has been named vice president of the Bank of America in charge of the bank's new oil division formed to foster postwar industry, it was announced in San Francisco by **President L. M. Giannini.** Col. Pyle, formerly with The Union Oil Company of California, was a member of **Gen. Eisenhower's** staff, and for a time served on **Gen. Montgomery's** staff in directing oil supply to Allied forces in Europe.

E. I. (Tommy) Thompson, Houston independent oil man and chairman of the Harris County veterans' service committee, will be presented the citizenship medal by the Veterans of Foreign Wars.

H. E. Heilman has been appointed operations manager for the B. F. Goodrich International Division, with headquarters in Akron, Ohio. He has been with the company since 1926 and previously served the international division for seven years.

G. M. Stewart, New York representative of Hunt Export Company, left September 22 for a tour of oil fields in South America. Hunt recently opened an office in Buenos Aires, Argentina.

J. C. Gilbert, Santa Monica district manager of the Southern Counties Gas Company, Los Angeles, has been elected to the company's board of directors to fill the vacancy created by the death of **Ferdinand B. Bain,** chairman of the board and a director of the company since 1911. Gilbert has been district manager since 1920.

Richard D. Buck, Schlumberger Well Surveying Corporation, has been elected president of the Shawnee Geological Society of Oklahoma. Other officers include **Delbert F. Smith,** Oklahoma Seismograph Company, vice president, and **Miss Marcelle Mousley,** The Atlantic Refining Company, secretary-treasurer.

Waldo S. Hull has joined the sales division of Pittsburgh Equitable Meter Company-Merco Nordstrom Valve Company. Hull was associated with the Central New York Power Corporation of the Niagara Hudson System from January, 1927, until he joined WPB's Office of War Utilities in October, 1942.

Waldo S. Hull

He will make his home in Philadelphia and will serve the Washington trading area.

Dr. J. J. Mullane has been appointed assistant chief petroleum engineer for The Carter Oil Company. Dr. Mullane, reservoir engineer for Carter since 1943, has been with the organization since his graduation from the University of Chicago in 1938. He became research engineer at Carter's Tulsa laboratory upon his graduation. He has been active in petroleum organizational work and now is serving on the well spacing and allocation production, the core analysis and the production technology committees of the API.

Dr. J. J. Mullane

Vayden C. Womack, who was in the production engineering department of Sinclair Prairie Oil Company before entering the service, is recovering from an eye injury in the Naval Hospital at Norman, Oklahoma. The injury was sustained when a shell exploded at close range.

J. H. Edmonds, general manager of Bethlehem Steel Company's plant at Lebanon, Pennsylvania, is retiring October 1, and will be succeeded by **Walter R. Penman,** former assistant general manager.

Edmonds has been general manager at Lebanon since 1928 and connected with Bethlehem since 1907. Penman joined the company at Lebanon in 1919 and has been assistant general manager since 1940.

Robert L. Riley, assistant factory superintendent and superintendent of the Bethlehem-Lebanon Forge Company during the war, succeeds Penman.

Oscar Nuss has been named district manager of the industrial rubber division for Thermoid Company, Trenton, New Jersey. He will serve the Southern California, New Mexico and Arizona areas.

Homer C. Moore, manager of geology and geophysics for Mid-Continent Petroleum Corporation, Tulsa, has resigned and will establish an independent geological consulting research institute at Tulsa.

W. G. Green, president of Engineering Laboratories, Inc., Tulsa, spoke before the Mid-Continent section, ASME, on the application of nuclear physics to industry in general.

John H. Murrell, Dallas, junior partner in the firm of DeGolyer & McNaughton, Inc., addressed the Oklahoma City Geological Society on oil production and reserves in the Middle East.

MEN IN THE INDUSTRY NEWS

Ferguson Barnes has been named vice president in charge of sales; **H. L. Putnam,** vice president in charge of Mid-Continent direct sales; and **G. W. Walton,** vice president in charge of machinery sales for International Derrick and Equipment Company.

Ferguson Barnes

Barnes has spent 30 years in engineering and sales for Ideco and other companies in the oil field and construction industries. Putnam, who will supervise all direct sales activities in the Mid-Continent and Rocky Mountain region, has just retired at a colonel's rank after three years in the Army air forces, 2½ of which were spent overseas. Before entering the service he was associated with The National Supply Company for 19 years.

G. W. Walton

H. L. Putnam

Walton, a former manager of Ideco drilling machinery sales, will continue to supervise the machinery department. Walton was once associated with The National Supply Company, Wilson-Snyder Manufacturing Company, Emsco and Unit Rig and Equipment Company.

Addison Young, research geologist for Phillips Petroleum Company, recently was elected president of the Midland, Texas, Geological Society. **W. Henry Conkling,** Sun Oil Company, was named vice president; **Miss Mary Louise Rhodes,** Standard Oil Company of Texas, was named secretary-treasurer; and **Karl A. Mygdal,** The Pure Oil Company, was made program committee chairman.

W. K. Powell of the Two States Drilling Company, Dallas, spoke before the Petroleum Accountants Society in Dallas. He is chairman of the Accounting Committee of the American Association of Oilwell Drilling Contractors, and gave an outline of the manual of Standard Accounting for drilling contractors, which has been completed by the committee.

Herschel Lewis and **J. C. Riley, Jr.,** have been named assistant managers of sales, Mid-Continent division, for D+B Division, Emsco Derrick & Equipment Company.

Herschel Lewis

J. C. Riley, Jr.

Lewis will be in charge of sales in Texas, New Mexico, Louisiana, Arkansas and Mississippi. Riley will be in charge of sales in Oklahoma, Kansas, Illinois, Indiana and Kentucky.

Lewis spent nine years with Gulf Oil Company and in 1937 became associated with Lamtex Equipment Corporation of Fort Worth. He joined D+B in 1944.

Riley joined the company in January, 1938. Starting with the Wichita Falls-Panhandle territory, he served in Ada, Oklahoma; Centralia, Illinois; Oklahoma City and Tulsa.

Major J. D. McCamey, who as safety engineer was granted a leave of absence from The Carter Oil Company, has returned after 28 months overseas and will assume new duties as assistant to the personnel manager.

After serving as petroleum officer through the Tunisian campaign, he was appointed ground force representative on a secretariat to the Petroleum Executive Committee of Tunisia.

On formation of the Adriatic Base Depot group in 1943, McCamey was appointed base petroleum officer. For outstanding and meritorious services he was awarded the Legion of Merit.

John S. King, formerly manager of the Fairbanks, Morse and Company pump division, has been named acting manager of the railroad division, succeeding **C. H. Wilson,** on leave of absence due to ill health. **Arnold G. Brown,** formerly assistant manager of the pump division, succeeds King.

W. K. Esgen is en route to Cairo, Egypt, where he will be geologist for Standard Oil Company (New Jersey). Esgen was formerly division geologist for Humble Oil & Refining Company at Corpus Christi, and was connected with **L. V. Manry** at Houston before accepting this position.

N. E. McKinney, for eight years sales manager of Thompson Tool Company, Iowa Park, Texas, has resigned to go into the insurance business with his son in Abilene, Texas.

LUFKIN MICROMETERS FOR EASY MEASURING

Lufkin micrometers make quick, easy work of miking hard-to-get-at surfaces. Tapered frame slips in where clearances are small, eliminating the need for gauge blocks, parallels, and other awkward miking methods. Less chance for error in reading since each thousandth graduation on the spindle is plainly numbered. In Lufkin mikes you get easy-to-read accuracy combined with quality and superior workmanship. Order through your supply house. Write for free catalog. THE LUFKIN RULE CO., SAGINAW, MICH., New York City.

LUFKIN FOR ACCURACY

MEN IN THE INDUSTRY NEWS

Thomas G. Bostic, who was local store manager for Jones & Laughlin Supply Company at Bruni, Texas, before he entered the Army, has returned after 33 months overseas. Bostic is to be sales representative for Jones & Laughlin at Alice, Texas.

J. C. Stirling, Stanolind Pipe Line Company, addressed the Purchasing Agents Association of Tulsa on "Protection of Underground Pipe."

Lt. Col. James S. Hopkins, geophysicist for Amerada Petroleum Corporation in Oklahoma City before entering the service, has returned to civilian life. Hopkins spent 30 months with the Eighth and Ninth Air Forces in the European theater as a radio and radar officer.

E. J. Ruwaldt, independent operator, has moved his headquarters from Mount Vernon, Illinois, to the McBurnett Building, San Angelo, Texas.

A. J. Bartlett has been named manager of industrial engine sales for Le Roi Company, Milwaukee. Bartlett majored in mechanical engineering at the University of Wisconsin and joined Le Roi in 1935. Starting as a draftsman, he progressed through the experimental department, where he engineered fuel economy tests on engines and air compressors, and the sales department, which he joined in 1938 as a sales engineer.

A. J. Bartlett

Lewis G. Harriman, president of the Manufacturers and Traders Trust Company, Buffalo, has been named to the board of directors of Sterling Engine Company, Buffalo.

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OIL FIELD operations make heavy demands on the oil man's time. To keep production up —to get through to location, more and more oil men are relying on fast flying, dependable planes. And when those planes are serviced and repaired, it must be done in a minimum of time with maximum skill and accuracy. Southwest Airmotive is equipped to do just that . . . to give private and commercial planes the fastest service in America today. Skilled manpower, finely equipped shops and complete stocks of nationally known and proved aircraft parts enable Southwest to give oil men the kind of service and maintenance that keeps them on the job!

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Southwest Airmotive Co.

SOUTHWEST AIRMOTIVE

LOVE FIELD, *Dallas*

Deaths

Francis O. Wyse, for 19 years publicity manager of Bucyrus-Erie Company, South Milwaukee, Wisconsin, died September 15 in Milwaukee.

Francis O. Wyse

Born in Salem, Massachusetts, May 4, 1897, Wyse spent the early years of his life in Toronto, Ontario. Following an educational interruption for service in the Navy, he was graduated from Massachusetts Institute of Technology in 1919. He joined Blanchard Machine Company, Cambridge, Massachusetts, and went to Bucyrus-Erie in 1924.

In 1926 he took over the management of the publicity department. He was secretary-treasurer and vice president before being elected president of the National Industrial Advertisers Association in 1937. He also served as president of the Milwaukee Association of Industrial Advertisers in 1932-33.

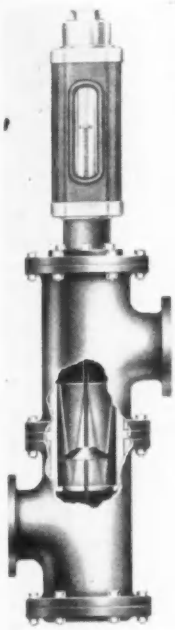
Martin J. Grogan of Shreveport, Louisiana, died September 24. Grogan, 49, was owner of the Grogan Oil Company.

A. J. Lockett, 70, independent oil man of Longview, died September 22.

Roy P. Dorris, Tulsa power engineer for The Texas Company, died September 21 in Oklahoma City. Dorris, 56, had been an employe of The Texas Company for nearly 36 years.

1—Gas, Liquids Recorder

Fischer & Porter Company, Hatboro, Pennsylvania, announces the Rotasleeve for measurement of large flows of liquids and gases. The instrument is said to give high accuracy, straight line calibration, wide flow range, low pressure loss and instantaneous response to flow changes.

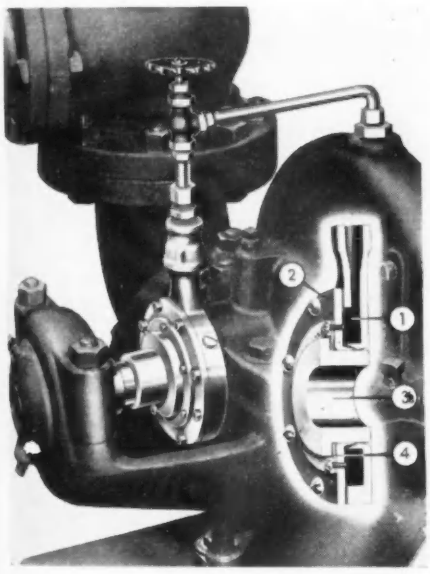


The device is a tapered metal sleeve which fits into standard pipe tees from sizes 3-inch and up. The flow enters the bottom, causing the flow indicating float to move upward and assume a position in direct proportion to the actual rate of flow. Flows as large as 14,000 gallons per minute of liquid and 16,000 cubic feet per minute of gas can be handled.

2—Seals

Jet Shaft Seals, Inc., Los Angeles, announces heat resistant and non-corrosive seals for horizontal centrifugal pumping units.

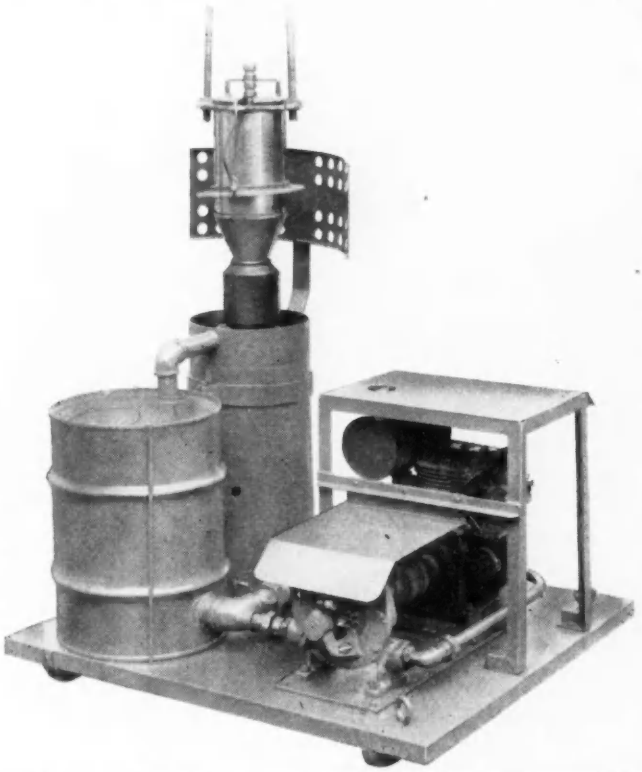
In principle the seal draws pressure from the high point and directs it back into the low pressure area of the pump with sufficient force to seal off internal pressure. The liquid flows through (1) the liquid box, inward past (2) the orifice plate and back into the pump. The shaft sleeve (3) turns with the shaft, but is not in contact with the orifice plate, hence there is no point of wear. The diaphragm (4) provides a leak-proof seal while the pump is not in operation, being pressed outward by the pressure within the pump against the shoulder of the shaft sleeve. There is no contact while the pump is turning, and only momentarily when the pump is actually starting or stopping.



Seals are available in both bronze and stainless steel, and in sizes for all pumps with one-inch shaft and over.

3—Hydraulic Expanding Unit

Patterson-Ballagh Company, Los Angeles, has introduced a self-contained gas engine driven hydraulic expanding unit for the rapid and effective installation of casing protectors. The protectors are installed on transfer sleeves for installation on the drill pipe lying on the rack, or onto the drill pipe as it is being lowered into the well.



This is a low pressure unit, said to be simple and rapid. With favorable conditions as many as 60 protectors per hour have been installed. The outfit is mounted on skids for ease in handling and is fitted with a shield for safe operation. The shaft, cones and sleeves are chrome-plated. All sizes of protectors and stabilizers can be installed. The unit is especially useful where the rig is shut down, or on pipe in the yard away from the rig.

Weight of the assembly, less sleeves and cones is 514 pounds.

4—Wire Dictating Machine

Standard Business Machines Company, Chicago, is to put on the market in December an office dictating machine utilizing wire recording. It will be housed in a plastic case about the size of a medium size table radio and the microphone can sit on the desk or be held in the hand. A thin, hair-like strand of steel, passing through a magnetic recording head will record reproducible speech vibrations from the microphone. Corrections or new dictation will be made simply by superimposing fresh dictation over old. Capacity of the recorder will be an hour's recording.

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In addition to information checked above, I would like more data on products or services advertised elsewhere in this issue by _____ Company

Name _____ Title _____

Company _____

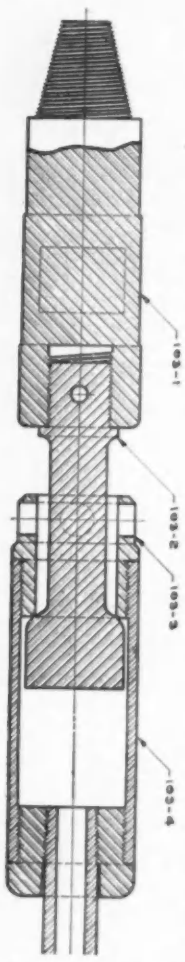
Address or P. O. Box _____

City _____ State _____

(To avoid delay print or type clearly name, company and mailing address)

5—Swab

C. M. Heeter, Sons & Company, Butler, Pennsylvania, has perfected the Heeter Improved Swab.



The valve construction has been changed so that it closes with an upward instead of a downward motion. This seating arrangement prevents gas pressure from forcing the valve open and dropping the fluid load. Also, it is claimed, if the swab is dropped too far into the liquid, part of the load can be dropped by the positive action of the valve. This prevents undue strain on the swabbing line in case the height of the fluid level is misjudged.

The upper part of the swab body is shown. The bottom part of the body contains the swab rubbers, spring, and lock nuts. When the swab is lowered into the hole, fluid enters the bottom of the swab body into the swab barrel (103-4) and out through the holes (103-3) above the valve. In lifting the load, the valve (103-2) pulls up against the ball seat, closing the valve. By closing with an upward motion, the valve is held closed by the force required to lift the fluid, plus the friction of the swab rubbers against the inside of the casing. Gas pressure tends to assist in this closing motion instead of tending to raise the valve, it is claimed.

6—Die Head

The Landis Machine Company, Waynesboro, Pennsylvania, announces a hardened and ground die head for use on automatic and semi-automatic screw machines. The new Type LL head which supersedes the Type L head has several features which assure more dependable service and greater thread accuracy.

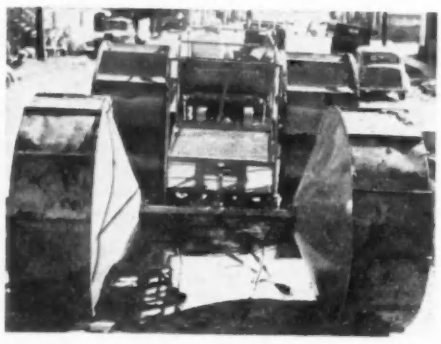
The major improvement is the use of latch blocks which take the place of the locking ring in the Type L head. The latch block abutments are readily reground after they have become worn in service, making a quick and economical means for repairing the die head. The latch blocks in this head are positioned in the adjusting ring. This is a decided advantage in that the abutments contact the back face of the closing ring in latching the head in the closed position. As the die head is adjusted for different diameters the latch blocks are continually using a different position on the abutting surface of the closing ring with the result that wear of any appreciable amount is extended over a considerable length of time.

The Type LL head is comprised of four major parts, whereas the Type L head had five major parts. The chaser holders for the Type LL heads are interchangeable with the chaser holders employed with the L head.

The Type LL head is now available in the 5/8 and 7/8-inch sizes.

7—Marsh Buggy

Ironcraft, Inc., Houston, announces the Kelpsch Floating Marsh Buggy. It is of all-steel construction with four drum-type steel wheels and negotiates open water as well as all types of marsh and swamp. Overall length is 20 feet. It is 10 feet, 6 inches wide and weighs approximately 6000 pounds. Land speed is from seven to eight miles per hour, and water speed is five miles per hour.



Power is supplied by a Ford V-8 motor with oversize radiator. A front-wheel drive is provided for greater maneuverability. The outfit can be handled on a self-loading trailer for easy transportation.

8—Overshot

The S. R. Bowen Company, Huntington Beach, California, announces the Series 350 Bowen Overshot, developed for catching strings of externally upset drill pipe. The overshot will catch and pack off pipe, pipe upset or tool joints without making any changes or adjustments.

Bowen Series 350 Overshot

The overshot is a three-bowl assembly, incorporating grapples and pack-off rubbers for the three sizes, milling members for rounding up the jagged ends of pipe or upset, and a guide for centering the fish in the tool. The manner of assembling the grapples in the tool provides the small outside diameter which enables this tool to be used under unusually tight hole conditions without sacrificing overall strength. For example, one popular overshot has an OD of inly 5¾ inches and catches and packs off 3½-inch drill pipe, 3-13/16-inch OD external upset, and 4¾-inch OD tool joints. Another has an OD of 7⅝ inches and catches and packs off 4½-inch drill pipe, 5-inch OD external upset, and 6⅛-inch OD tool joints.

An important feature of the overshot is that it both sets and releases on right-hand rotation, thus avoiding the dangers of turning the string in an unscrewing direction. Right-hand rotation of the string expands the grapple as the tool is simultaneously lowered over the fish, and simply allowing rotation to stop causes the grapple to take hold on the fish. Thereafter when upward pull is exerted the hold is secure, since the overshot takes hold as soon as it is over the fish. Release is easily effected by simply first bumping down to break the hold and then turning the run-in string to the right to again expand the grapple and, at the same time, slowly raising the string until the overshot is clear.

Literature

9—Reference Data

The Torrington Company, Torrington, Connecticut, and South Bend, Indiana, has published a 153-page catalog and engineering and application data reference volume for designers and engineers. Entitled "Torrington Needle Bearings" and listed as Edition 32, it supplies all pertinent engineering information on the

various Needle Bearings identified as Types LN, DC, NCS, AT and RC.

A separate section on application data, profusely illustrated with cross-section drawings, shows a wide variety of uses in equipment of aircraft, automotive, farm equipment, machine tool, material handling, petroleum, power, steel, textile, and miscellaneous industries.

Included in the informatory data are specifications and tolerances, load capacities, design factors, installation and inspection data and various standards. The manual is fully indexed for handy reference and has many tables, formulae and illustrations that clarify the technical data and serve as a valuable guide for the engineer and production executive.

10—Porcelain Plungers

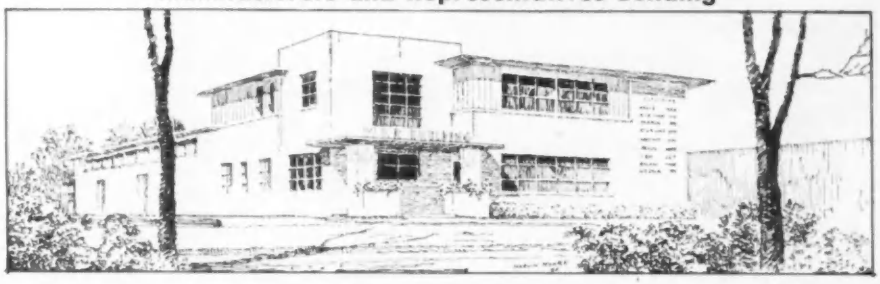
Aldrich Pump Company, Allentown, Pennsylvania, has published a six-page illustrated data sheet, No. 57-2, describing porcelain plungers which can be used on almost any hydraulic pump. The data sheet gives complete construction details, specifications, types of service and purchasing information.

11—Armored Rotameters

Fischer & Porter Company, Hatboro, Pennsylvania, has published Catalog 43-E, describing armored rotameters for measuring and controlling flow rates at high pressures and temperatures.

This catalog describes standard armored indicating meters and also recording or recording-controlling or totalizing armored meters with readings at the meter or at a remote location. It includes illustrations of many designs to accommodate pressures as high as 10,000 pounds per square inch and temperatures up to 750° F.

Manufacturers and Representatives Building



Dunlap and Seaman of Houston will soon construct a building in Odessa, Texas, for oil field equipment manufacturers and their representatives. The building will be on the Odessa-Monahans highway within 12 blocks of the heart of town. It will provide adequate office and warehouse space for oil field specialty men. Twelve private offices with adjoining warehouse will be on the ground floor.

All occupants will be entitled to the use of a fire and burglar-proof vault. In order that each occupant may be able to display his products, he will be given space in the reception room. There will be a large office space on the second floor for representatives who require only a desk, telephone, and stenographic service.

Use the Coupon

For free copies of Manufacturers Literature or more information on products described on these pages, use the convenient mailing coupon on page 93.

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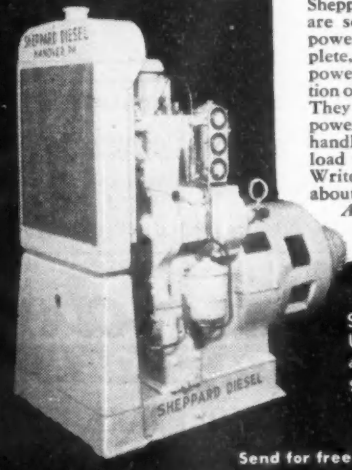

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Third Star Received

The Manhattan Rubber Manufacturing Division of Raybestos-Manhattan, Inc., Passaic, New Jersey, has been awarded the third white star to be added to its Army-Navy E Pennant for meritorious services in production of war material. The original award was made in 1943.

Bucyrus-Erie Distributors

Bucyrus-Erie Company, South Milwaukee, Wisconsin, announces new distributors for its products, as follows: A. E. Hudson Company, Peoria, Illinois, will handle the Bucyrus-Erie excavating and dirt moving equipment in central Illinois. Indiana Equipment Company, Indianapolis, will handle the line in central and northeastern Indiana.

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